Algebra II Lesson #5 Unit 3 Class Worksheet #5 For Worksheet #5

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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$$V = LWH$$

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$$V = LWH$$
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$$V = LWH$$

 $V = (6 \text{ ft.})(4 \text{ ft.})(3 \text{ ft.})$

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$$V = LWH$$
 $V = (6 \text{ ft.})(4 \text{ ft.})(3 \text{ ft.})$
 $V = 72$

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1. How long will it take to fill the tank? _____

$$V = LWH$$
 $V = (6 \text{ ft.})(4 \text{ ft.})(3 \text{ ft.})$
 $V = 72 \text{ cu. ft.}$

Time = 72 cu. ft. \div 4 cu. ft. per min.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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1. How long will it take to fill the tank? 18 minutes

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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1. How long will it take to fill the tank? 18 minutes

t	f(t)	

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1. How long will it take to fill the tank? 18 minutes

t	f(t)
0	
3	
6 9	
9	
12	
15	
18	

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

1. How long will it take to fill the tank? **18 minutes**

2. Make a table giving t and f(t) every 3 minutes from t = 0 until

the tank is full.

t	f(t)
0	
3 6 9	
6	
9	
12	
15	
18	

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1. How long will it take to fill the tank? **18 minutes**

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

the talk is full.	
t	f(t)
0	
3	
6	
9	
2	
8	
	0 3 6 9

When t = 0, the tank is empty.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

the tunk is full.	
t	f(t)
→ 0	
3	
3 6 9	
9	
12	
15	
18	

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2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

the tulik is full.	
t	f(t)
→ 0	0
3	
3 6 9	
9	
12	
15	
18	

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0	0	
3		
6		
9		
12		
15		
18		

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1. How long will it take to fill the tank? 18 minutes

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

-			-
i	t	f(t)	
	0	0	
	0 3		
	6 9		
	12		
	15		
	18		

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- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

t	f(t)
0	0
3	
6	
12	
15	
18	

When t = 0, the tank is empty. The water is 0 inches deep.

When t = 18, the tank is full.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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ı	t	f(t)
	0	0
	0 3 6 9	
	6	
	9	
	12	
	15	
	18	

When t = 0, the tank is empty. The water is 0 inches deep.

When t = 18, the tank is full. The water is 36 inches deep.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

1. How long will it take to fill the tank? 18 minutes

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

t	f(t)
0	0
3	
6	
12	
15	
18	36

When t = 0, the tank is empty. The water is 0 inches deep.

When t = 18, the tank is full. The water is 36 inches deep.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in minutes). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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t	f(t)
0	0
0 3	
6 9	
9	
12	
15	
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A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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t	f(t)
0	0
3 6 9	
6	
_	
12	
15	
18	36

The water depth increases 36 inches

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

<u>t</u>	f(t)
0	0 -
3	
3 6 9	
12	
15	
18	36

The water depth increases 36 inches in 18 minutes.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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ı	t	f(t)	
	- 0	0	
	3		
	6 9		
	12		
	15	•	
—	18	36	←

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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-	t	f(t)	
	0	0	
	3		
	3 6 9		
	12		
	15	• -	
L	18	36	—

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

It increases 6 inches every 3 minutes.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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<u>t</u>	f(t)	
0	0 —	1
⇒ 3		
6		
9		
12		
15		
18	36	

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

It increases 6 inches every 3 minutes.

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- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

<u>t</u>	f(t)
0	0
⇒ 3	6
6	
9	
12	
15	
18	36

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

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- 1. How long will it take to fill the tank? **18 minutes**
- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

t	f(t)
0	0
3	6
→ 6	
9	
12	
15	
18	36

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

-	t	f(t)	
	- 0	0	
	3	6	
_	→ 6	12	
	9		
	12		
	15		
	18	36	←

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

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- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

t	f(t)
0	0 -
3	6
6	12
⇒ 9	
12	
15	
18	36

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- 1. How long will it take to fill the tank? **18 minutes**
- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

<u>t</u>	f(t))
0	0	
3	6	
6	12	
→ 9	18	
12	2	
15	5	
18	3 36	4

The water depth increases 36 inches in 18 minutes.

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A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

- 1. How long will it take to fill the tank? **18 minutes**
- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

t	f(t)
0	0
3	6
6	12
9	18
→ 12	
15	
18	36

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

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- 1. How long will it take to fill the tank? 18 minutes
- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

t	f(t)
0	0
3	6
6	12
9	18
→ 12	24
15	
18	36

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

- 1. How long will it take to fill the tank? **18 minutes**
- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

-	t	f(t)	
	- 0	0	
	3	6	
	6	12	
	9	18	
	12	24	
_	→ 15		
	18	36	←

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

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- 1. How long will it take to fill the tank? **18 minutes**
- 2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

-	t	f(t)	
	0	0	
	3	6	
	6	12	
	9	18	
	12	24	
_	→ 15	30	
	18	36	4

The water depth increases 36 inches in 18 minutes.

It increases at 2 inches per minute.

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1. How long will it take to fill the tank? 18 minutes

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

_			-
	t	f(t)	
	- 0	0	
	3	6	
	6 9	12	
	9	18	
	12	24	
	15	30	
	> 18	36	←

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1. How long will it take to fill the tank? 18 minutes

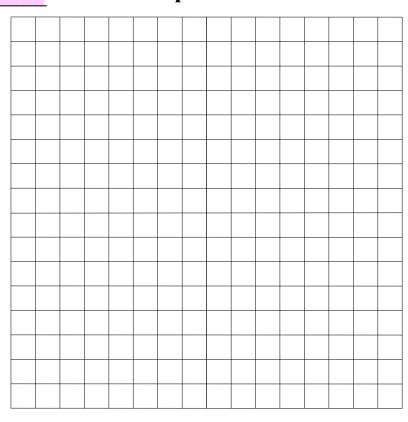
t	f(t)
0	0
3	6
6	12
9	18
12	24
15	30
18	36

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in minutes). Let f(t) represent the **depth of the water** in the tank (in **inches**).

1. How long will it take to fill the tank? 18 minutes

3. Graph function f.

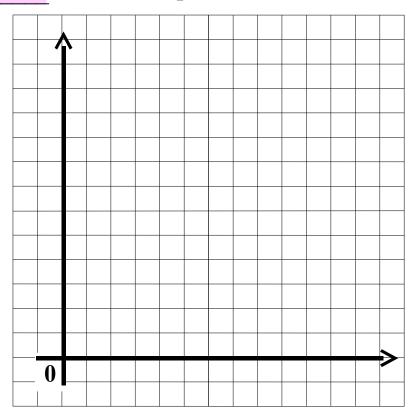
t	f(t)
0	0
3	6
6	12
9	18
12	24
15	30
18	36



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- 1. How long will it take to fill the tank? 18 minutes
- 3. Graph function f.

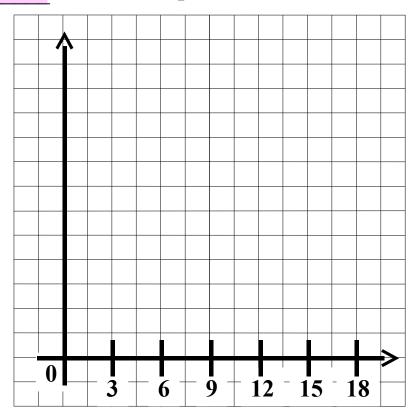
t	f(t)
0	0
3	6
6	12
9	18
12	24
15	30
18	36



A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

- 1. How long will it take to fill the tank? 18 minutes
- 3. Graph function f.

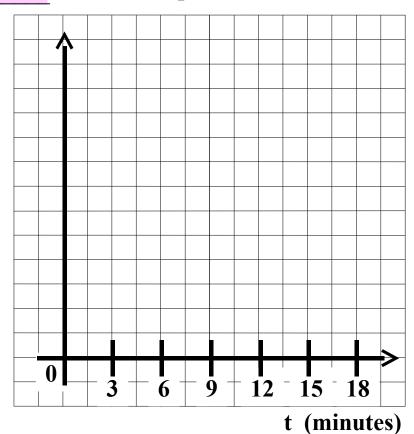
t	f(t)
0	0
3	6
6	12
9	18
12	24
15	30
18	36



A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

- 1. How long will it take to fill the tank? 18 minutes
- 3. Graph function f.

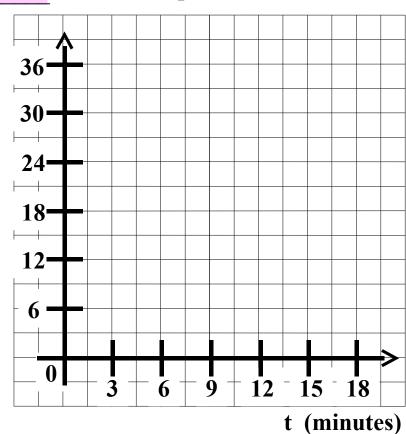
t	f(t)
0	0
3	6
6	12
9	18
12	24
15	30
18	36



A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

- 1. How long will it take to fill the tank?
- 18 minutes
- 3. Graph function f.

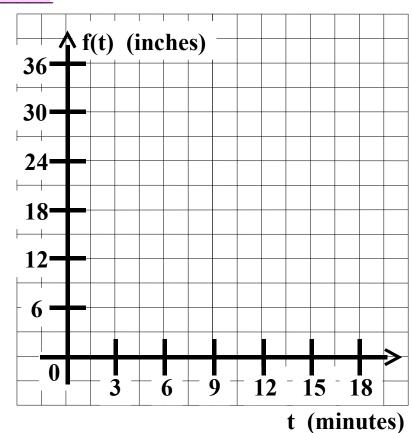
t	f(t)
0	0
3	6
6	12
9	18
12	24
15	30
18	36



A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

- 1. How long will it take to fill the tank?
- 18 minutes
- 3. Graph function f.

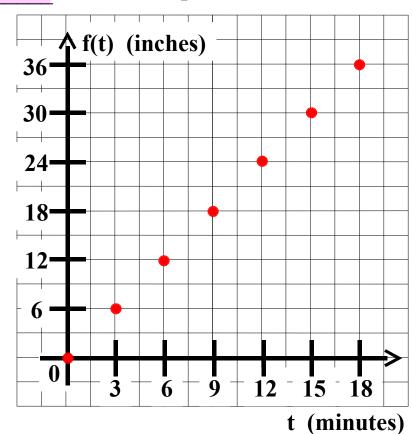
t	f(t)
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3	6
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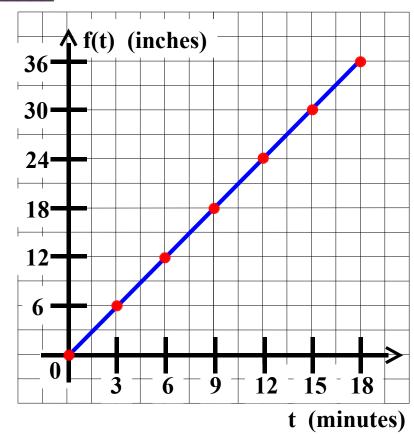
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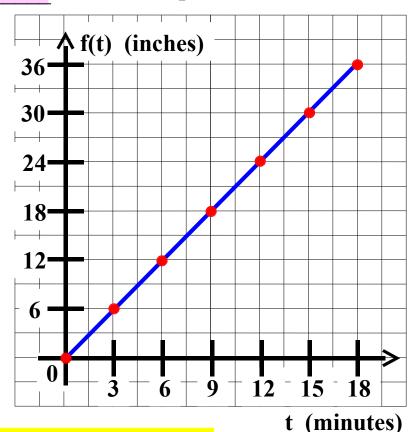


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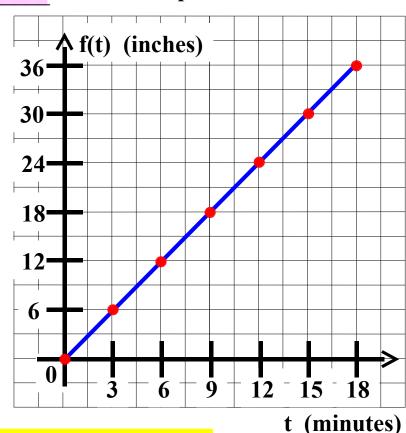
4. Write an equation giving f(t) in terms of t.

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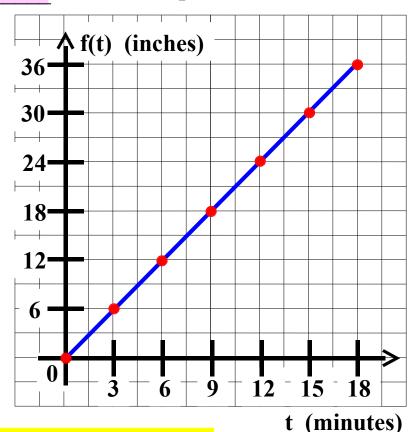
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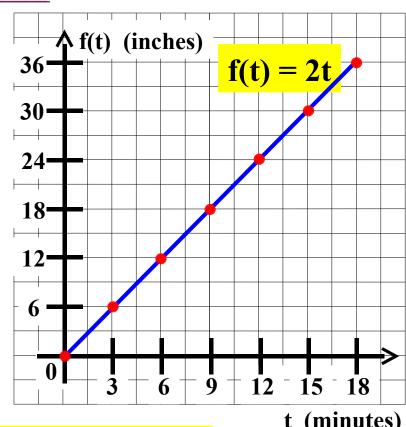
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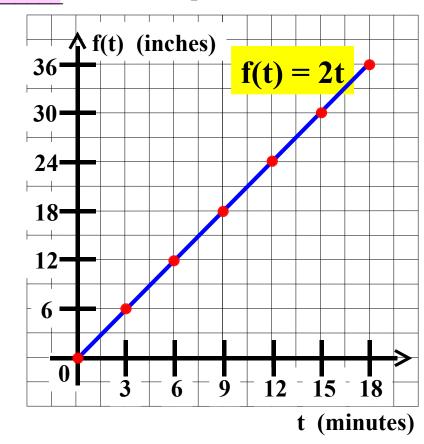
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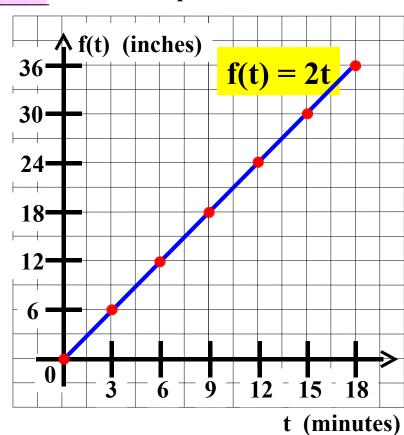


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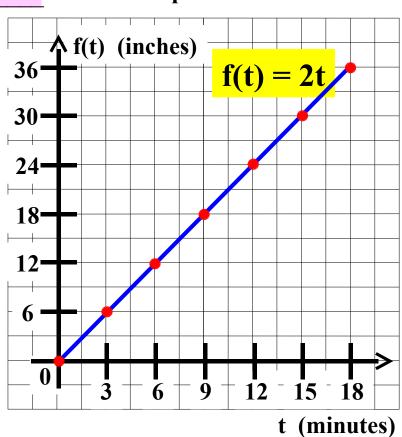
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	-



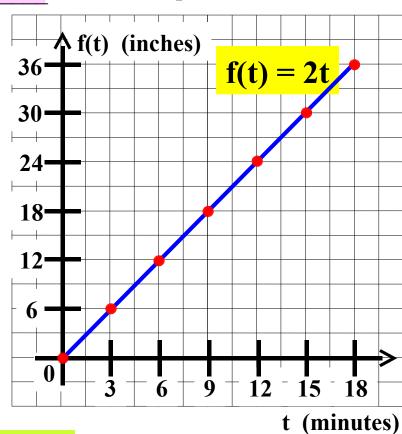
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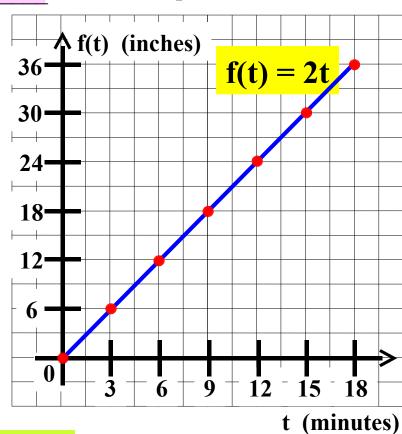
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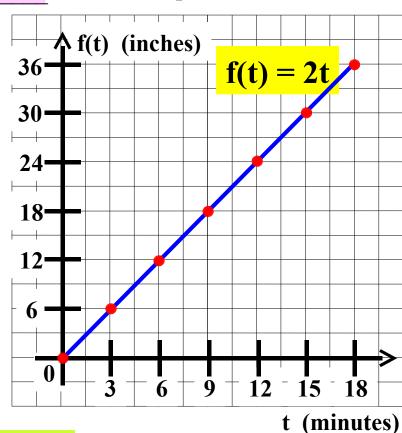
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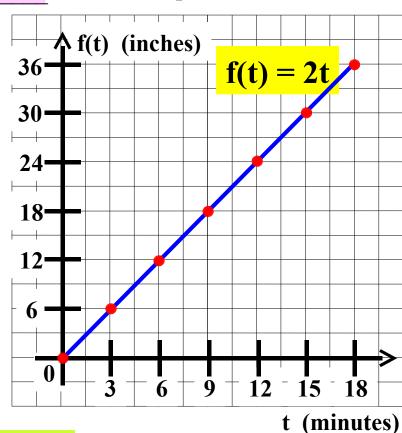
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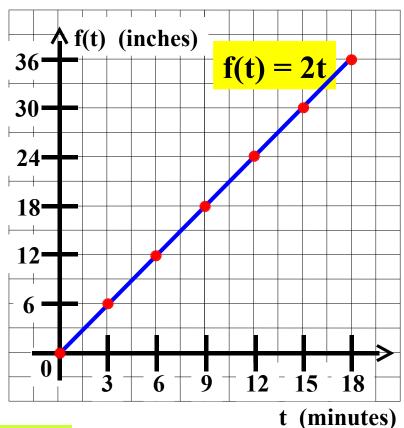
18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full. domain

iie talik is luli.		
t	f(t)	
0	0	
3	6	
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	•	

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t	f(t)	
0	0	
3	6	
6	12	
9	18	
12	24	
15	30	

18 | 36

 \uparrow f(t) (inches) 36f(t) = 2t30-24-18-12-6 -9 **12** 18 t (minutes)

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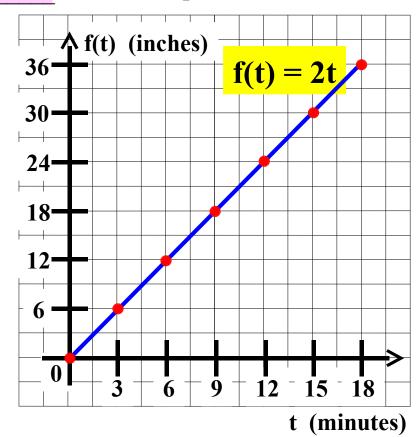
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domain [0, 18]



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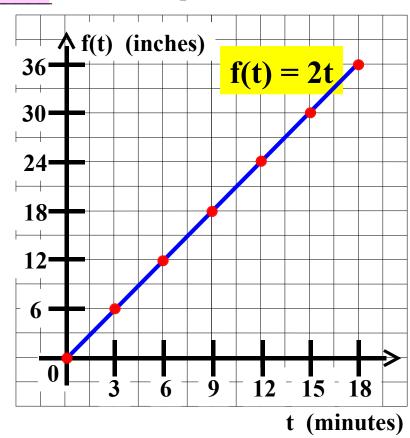
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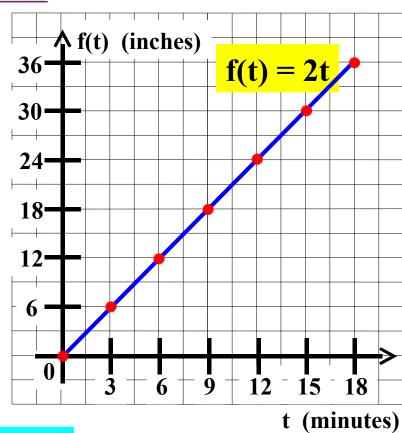
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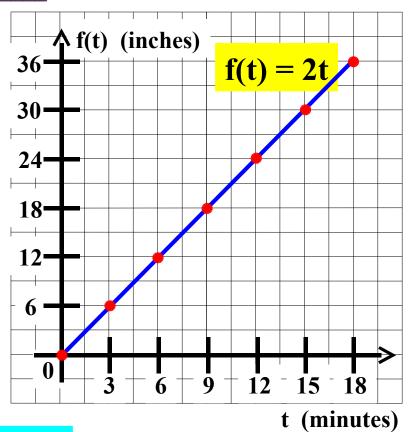
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2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full domain

ne tan	f(t)	
t	f(t)	_
0	0	_
3	6	

12

18

24

30

36

9

12

15

18

[0, 18]

	f(t)	(in	che	(2s)					
36		(111			f (1	t) =	= 2t		
30	_			, 					
24	_								
18	_								
12									
6	_								
$-\frac{1}{0}$			6	- 1		12	15	- 1Q	>
		,	U				t (m	_	es'

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ne tunn is run.				
t	f(t)			
0	0			
3	6			
6	12			
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15	30			
18	36			

[0, 18]

	f (t)	(i)	nche	es) -					
36					f (1	t) =	= 2t		
30-	_								
24-									
18-	_								
12-	_								
6 -	_								
	4								>
0		$\frac{1}{3}$	- 6 -	- 9	+ 1	12	15	- 18	-

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2. Make a table giving t and f(t) every 3 minutes from t = 0 until

12

15

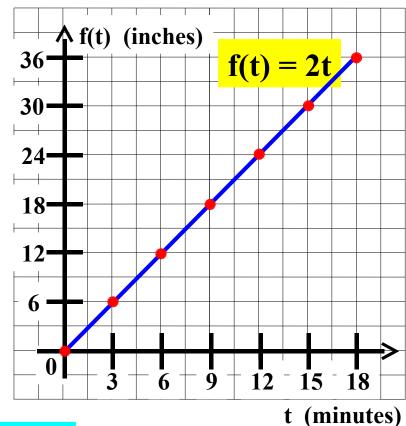
18

24

30

36

	k is tu	^{ıll.} domain
<u>t</u>	f(t)	[0, 18]
0	0	range
3 6 9	6 12	[0, 36]
9	12 18	<u> / J</u>



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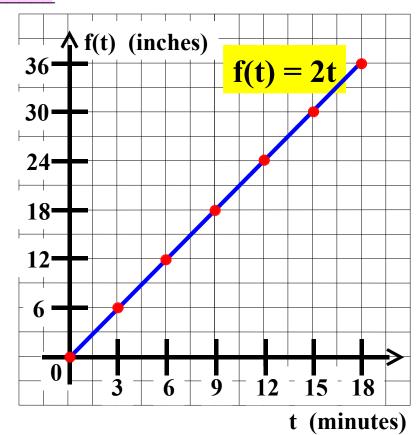
18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

me tunk is run.				
t	f(t)			
0	0			
3	6			
6	12			
9	18			
12	24			
15	30			
18	36			

domain
[0, 18]
range
[0, 36]



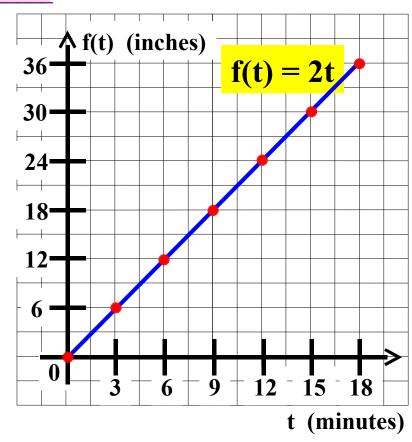
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18 minutes

3. Graph function f.

he tank is full.		. domain
<u>t</u>	f(t)	[0, 18]
0 3	0 6	range
6	12	[0, 36]
9	18	7. Evaluate f(4).
12	24	7.0 = 7.00=0000 = (1.70
15	30	
18	36	



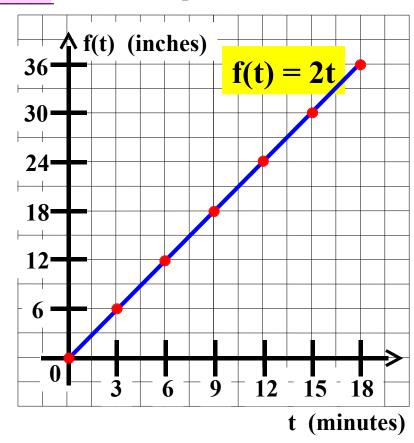
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3. Graph function f.

he tan	k is full	domair
<u>t</u>	f(t)	[0, 18]
0	0	range
3 6	6 12	[0, 36]
9	18	7. Evaluate f(4).
12	24	f(t) = 2t
15	30 36	_(3) _3
18	36	



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15

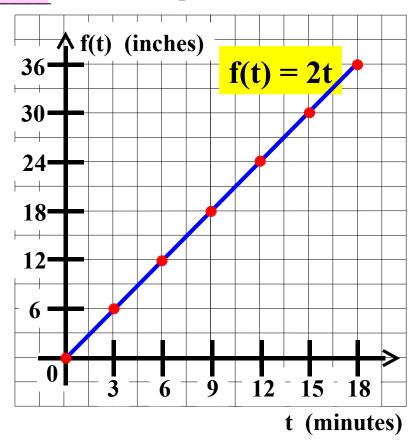
18

30

36

he tank is full.		. domain
t	f(t)	[0, 18]
0	0	range
3 6	6 12	[0, 36]
9	18	7. Evaluate f(4).
12	24	f(t) - 2t

f(t) = 2tf(4) =



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15

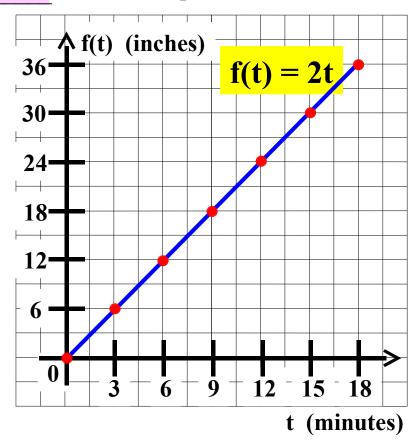
18

30

36

he tank is full.		. domain
t	f(t)	[0, 18]
0	0	range
3 6	6 12	[0, 36]
9	18	7. Evaluate f(4).
12	24	f(t) - 2t

f(t) = 2tf(4) = 2(4)



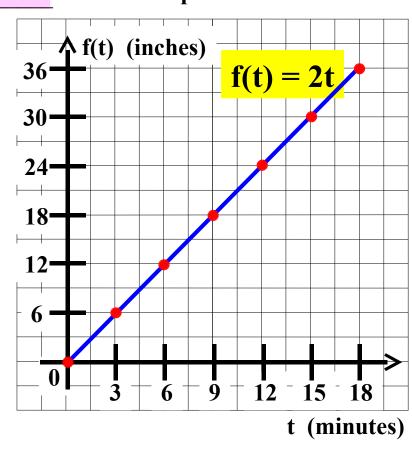
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3. Graph function f.

the tan	k is full	domain
<u>t</u>	f(t)	[0, 18]
0 3 6	0 6 12	range [0, 36]
9 12 15 18	18 24 30 36	7. Evaluate $f(4)$. f(t) = 2t f(4) = 2(4)
	•	f (4) =



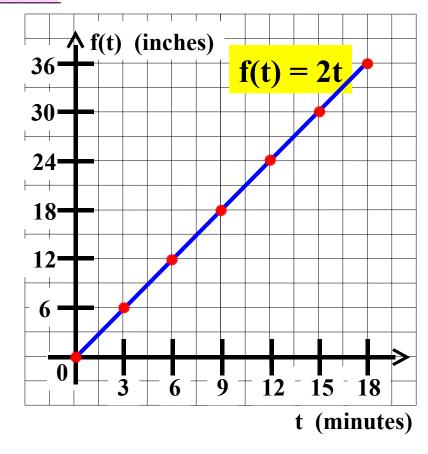
A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

4	I C (4)	domaii domaii
t	f(t)	[0, 18]
0	0	range
3	6	
6	12	[0,36]
9	18	7. Evaluate f(4).
12	24	f(t)=2t
15	30	
18	36	f(4)=2(4)
	-	f(4) = 8



A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

1. How long will it take to fill the tank? 18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

THE TAILK IS TUIL.		l•	<u>domain</u>	
<u>t</u>	f(t)	_	[0, 18]	
0	0		range	
3	6		[0, 36]	
6	12		[0, 50]	
9	18	7. Evalua	te f(4).	

12

15

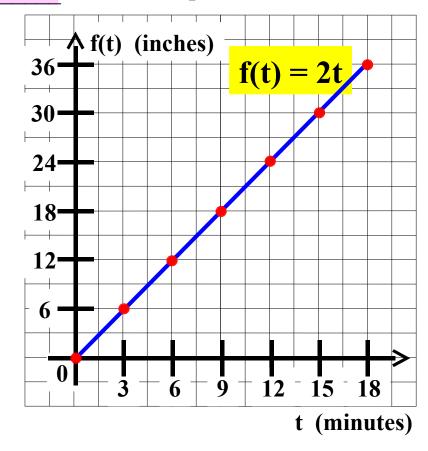
18

24

30

36

$$f(4) = 8$$



A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

1. How long will it take to fill the tank?

18 minutes

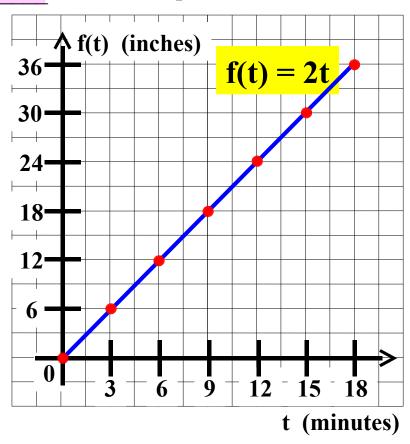
3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

the tan	k is full	domai
<u>t</u>	f(t)	[0, 18
0	0	range
3	6	
6	12	[0,36]
9	18	7. Evaluate f(4).
12	24	What does f(4) re
15	30	in terms of the pr
18	36	in terms of the pr

domain
[0, 18]
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ate f(4).
es f(4) represent
of the problem?

$$f(4) = 8$$



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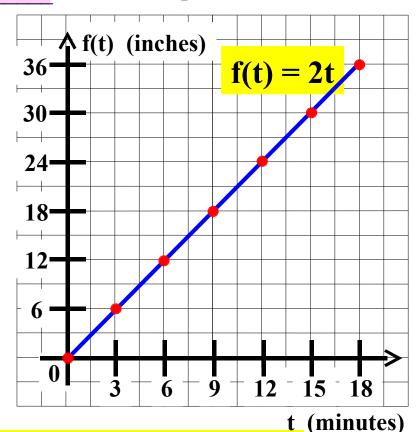
1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

ie tan	k is full	domain
t	f(t)	[0, 18]
0	0	
3	6	range
3 6 9	12	[0, 36]
9	18	7. Evaluate f(4).
12	24	What does f(4) represent
15	30 36	in terms of the problem?
18	36	in terms of the problem.
	•	f(4) = 8



f(4) represents

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in minutes). Let f(t) represent the **depth of the water** in the tank (in **inches**).

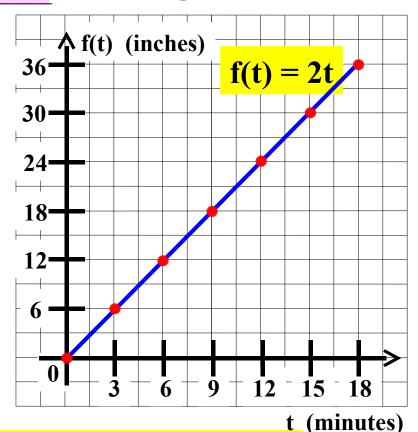
1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

Make a table giving t and f(t)

•		es from $t = 0$ until
,	k is full	domain
<u>t</u>	f(t)	[0, 18]
0	0	
3	6	range
3 6 9	12	[0, 36]
9	18	7. Evaluate f(4).
12	24	What does f(4) represent
15	30 36	` '
18	36	in terms of the problem?
	1	f(4) = 8



f(4) represents the <u>depth of the water</u>

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

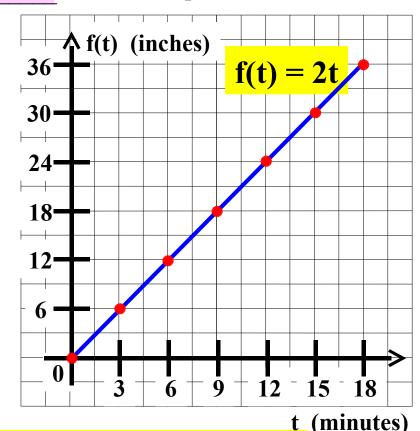
1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

v		es from t – v i	unun
the tank is full.		l•	domain
<u>t</u>	f(t)	<u>.</u>	[0, 18]
0	0		range
3	6		
3 6 9	12		[0,36]
	18	7. Evalua	te f(4).
12	24	What doe	s f(4) represent
15	30		·
18	30 36	in terms o	of the problem?
	•	f (4) =	8



f(4) represents the depth of the water after 4 minutes.

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

1. How long will it take to fill the tank?

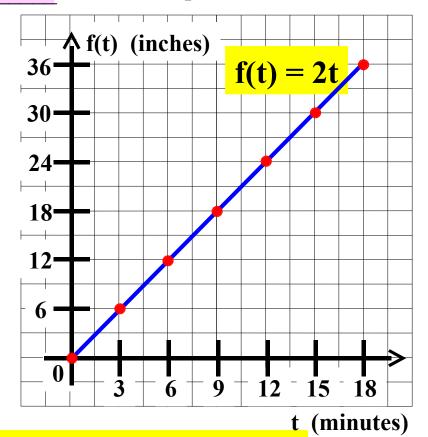
18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

•	k is full	
t tan	f(t)	. domain
	1(1)	[0, 18]
0	0 6	range
3 6 9	12	[0, 36]
	18	7. Evaluate f(4).
12	24	What does f(4) represent
15	30 36	in terms of the problem?
18	36	
		C(A)

f(4) = 8



f(4) represents the depth of the water after 4 minutes.

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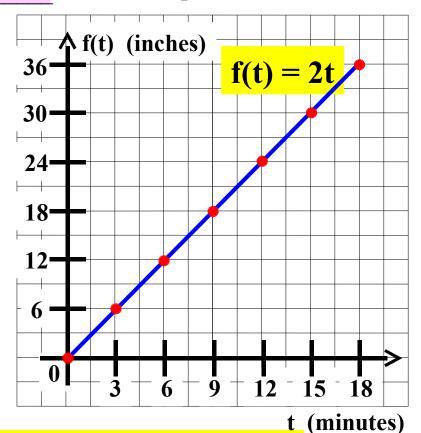
1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

·		cs ir om t o until
ine tan	k is full	. domain
<u>t</u>	f(t)	[0, 18]
0	0	range
3	6	
6 9	12	[0, 36]
9	18	7. Evaluate f(4).
12	24	What does f(1) represent
15	30	What does f(4) represent in terms of the problem?
18	36	in terms of the problem.
		f(4) = 8 inches



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1. How long will it take to fill the tank?

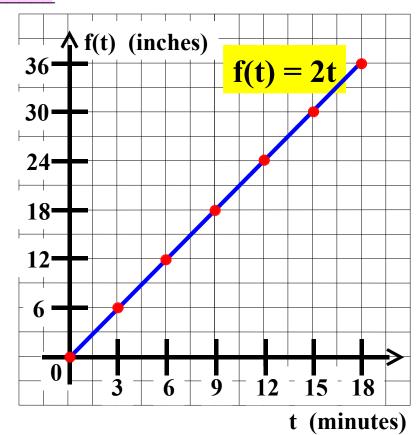
18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

me tunne is run.		
t	f(t)	
0	0	
3	6	
6	12	
9	18	
12	24	
15	30	
18	36	

domain
[0, 18]
range
[0, 36]



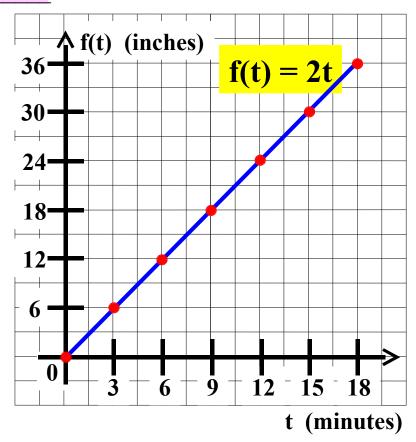
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1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

v		tes irom t = v untii
he tan		". domain
<u>t</u>	f(t)	[0, 18]
0	0	range
3 6 9	12	[0, 36]
9	18	8. If $f(t) = 30$, then find
12	24	the value of t.
15	30 36	
18	36	
·	-	



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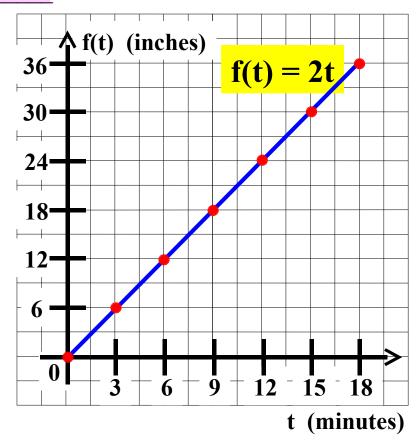
18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

v	k is fu	ll. domain
<u>t</u>	f(t)	[0, 18]
0 3 6 9	0 6 12	range [0, 36]
	18	8. If $f(t) = 30$, then find the value of t
12 15	24 30 36	the value of t.
18	36	

f(t) = 30



A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

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18 minutes

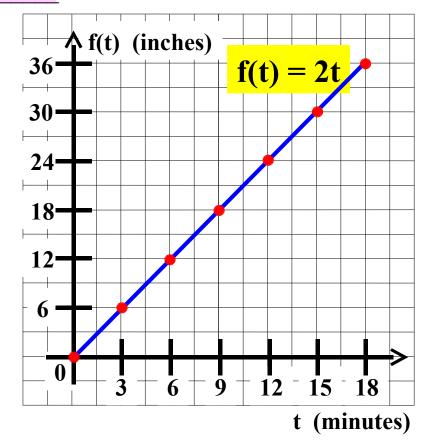
3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

the tan	k is fu f(t)	domain
0 3 6	0 6 12	range [0, 36]
9 12	18 24	8. If f(t) = 30, then find the value of t.
	•	

f(t) = 30

2t = 30



A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

1. How long will it take to fill the tank? 18 minutes

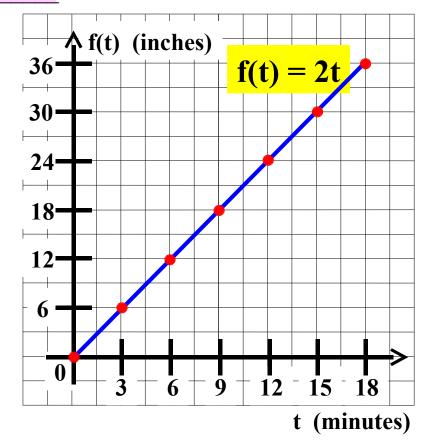
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the tank is full.		^{ll.} domain
<u>t</u>	f(t)	[0, 18]
0 3 6 9	0 6 12	range [0, 36]
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18	30 36	

 $f(t) = 30 \implies t =$

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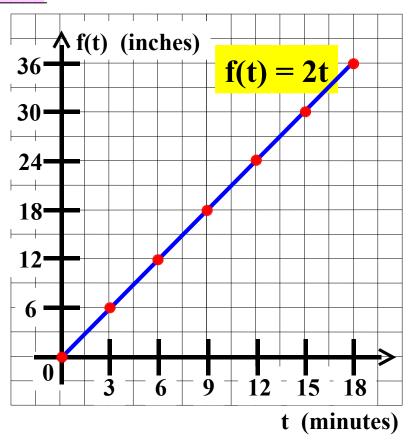
1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

he tank is full.		^{ll.} domain
t	f(t)	[0, 18]
0	0 6	range
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12	24	the value of t.
15	30	
18	36	

$$f(t) = 30 \implies t = 15$$
$$2t = 30$$



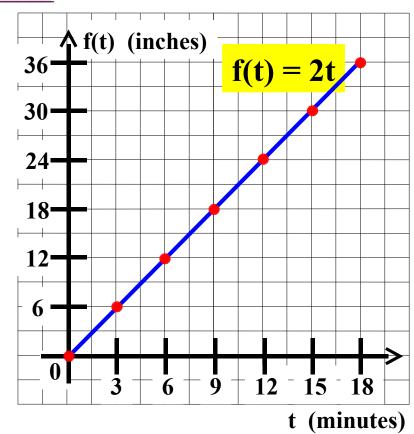
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1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

the tank is full.		domain
t	f(t)	[0, 18]
0	0 6	range
3 6 9	6 12	[0, 36]
9	18	8. If $f(t) = 30$, then find
12	24	the value of t.
15	30 36	
18	36	



$$f(t) = 30 \implies t = 15$$

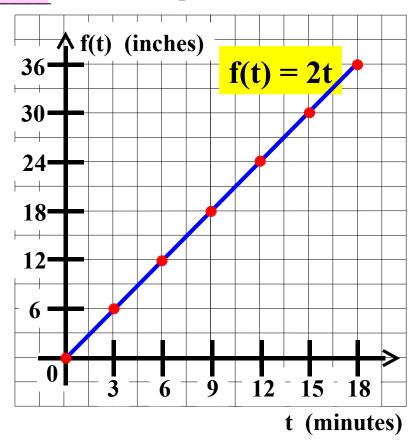
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1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

the tank is full.		ll. domain
<u>t</u>	f(t)	[0, 18]
0 3	0 6	range
6	12	[0, 36]
9	18	8. If $f(t) = 30$, then find
12	24	the value of t.
15	30 36	What does this value of t
18	36	represent in terms of the
·	-	problem?
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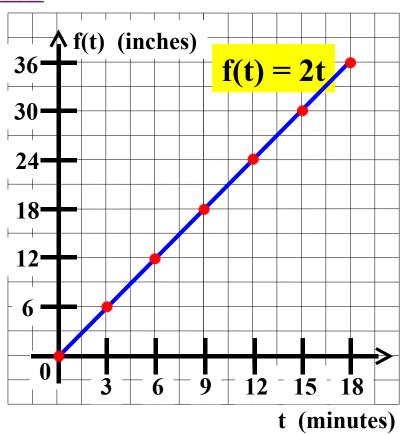
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the tank is full		^{ll.} domain
t	f(t)	[0, 18]
0	0	range
3 6	6 12	[0, 36]
9	18	8. If $f(t) = 30$, then find
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15	30	What does this value of t
18	36	represent in terms of the
		problem?
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This represents

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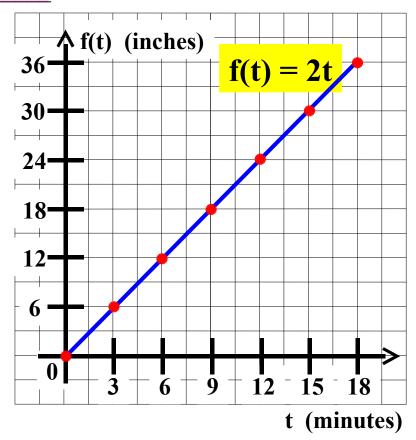
1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

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the tank is full		^{ll.} domain
t	f(t)	[0, 18]
0	0	range
3 6	6 12	[0, 36]
9	18	8. If $f(t) = 30$, then find
12	24	the value of t.
15	30	What does this value of t
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		problem?
		$f(t) = 30 \implies t = 15$



This represents the time

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

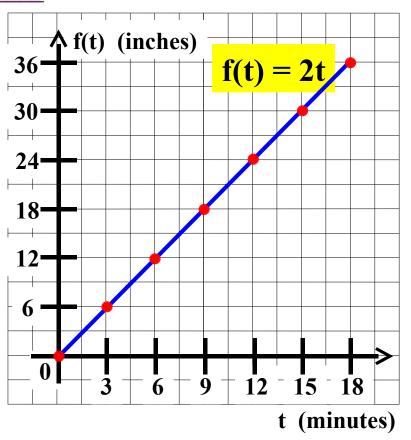
1. How long will it take to fill the tank?

18 minutes

3. Graph function f.

2. Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.

the tank is fu		^{ll.} domain
<u>t</u>	f(t)	[0, 18]
0	0 6	range
3 6	12	[0, 36]
9	18	8. If $f(t) = 30$, then find
12	24	the value of t.
15	30	What does this value of t
18	36	represent in terms of the
'	•	problem?
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This represents the time it took for the water

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty initially and water is pumped into the tank at 4 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let f(t) represent the **depth of the water** in the tank (in **inches**).

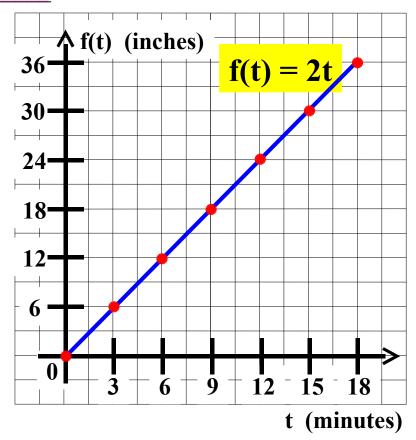
1. How long will it take to fill the tank?

18 minutes

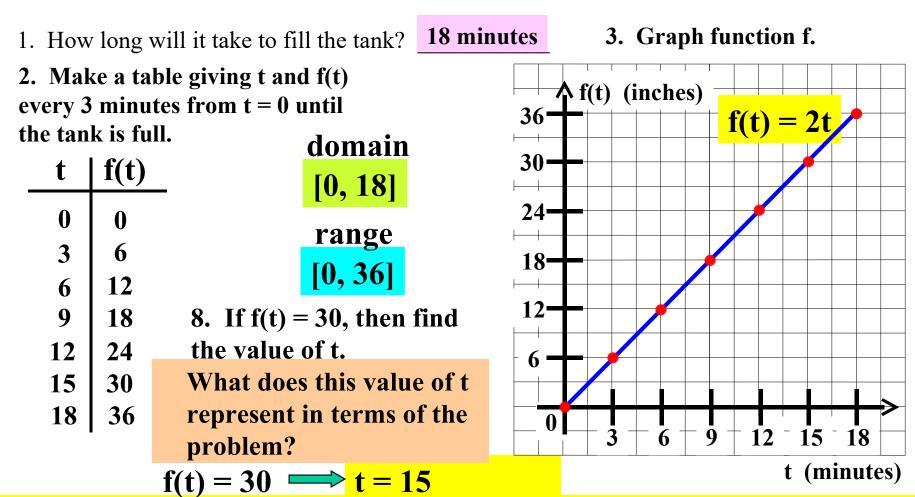
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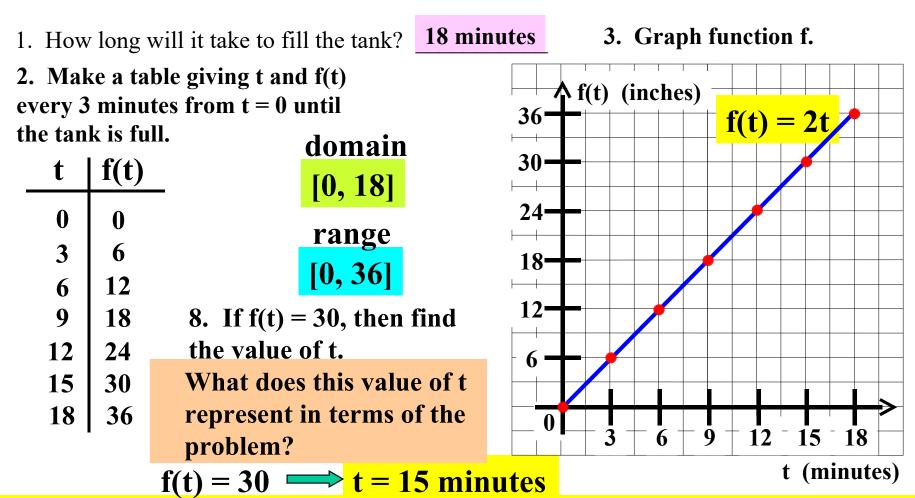
the tank is full.		^{ll.} domain
t	f(t)	[0, 18]
0 3	0 6	range
6	12	[0, 36]
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!	•	problem?
	·	$f(t) = 30 \implies t = 15$



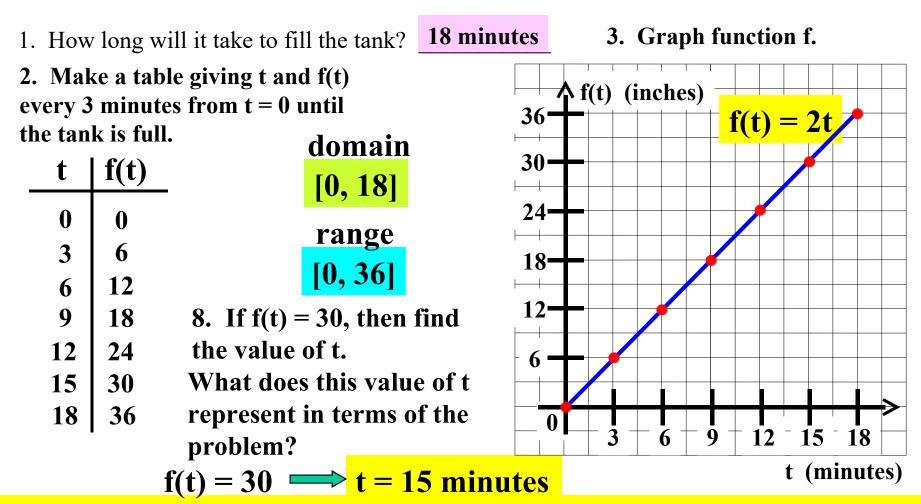
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A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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9. How long will it take to empty the tank? _____

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9. How long will it take to empty the tank? _____

$$V = LWH$$

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$$V = LWH$$
 $V =$

$$V =$$

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$$V = LWH$$

 $V = (10 \text{ ft.})(4 \text{ ft.})(3 \text{ ft.})$

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$$V = LWH$$
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$$V = LWH$$
 $V = (10 \text{ ft.})(4 \text{ ft.})(3 \text{ ft.})$
 $V = 120$

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9. How long will it take to empty the tank? _____

$$V = LWH$$

$$V = (10 \text{ ft.})(4 \text{ ft.})(3 \text{ ft.})$$

$$V = 120$$
 cu. ft.

Time = 120 cu. ft. \div 6 cu. ft. per min.

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 cu. ft.

Time = 120 cu. ft.
$$\div$$
 6 cu. ft. per min.

$$Time = 20 minutes$$

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

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9. How long will it take to empty the tank? 20 minutes

t	F(t)

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

t	F(t)
0	
5	
10	
15	
20	

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

t	F(t)
0	
5	,
10	
15	5
20)

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

t	F(t)
0	
5	
10	
15	
20	

When t = 0, the tank is full.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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<u>t</u>	F(t)
0	
5	
10	
15	
20	

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

t	F(t)
0	36
5	
10	
15	
20	

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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0	36
5	
10	
15	
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9. How long will it take to empty the tank? 20 minutes

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

<u>t</u>	F(t)
0	36
5	
10	
15	
20	

When t = 0, the tank is full. The water is 36 inches deep.

When t = 20, the tank is empty.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

<u>t</u>	F(t)
0	36
5	
10	
15	
20	

When t = 0, the tank is full. The water is 36 inches deep.

When t = 20, the tank is empty. The water is 0 inches deep.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

$\mathbf{t} \mathbf{F}(\mathbf{t})$	When $t = 0$, the tank is full.
0 36 5	The water is 36 inches deep.
$ \begin{array}{c c} 10 \\ 15 \\ \hline 20 \\ 0 \end{array} $	When $t = 20$, the tank is empty. The water is 0 inches deep.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

t	F(t)
0	36
5	
10	
15	
20	0

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

t	F(t)
0	36
5	
10	
15	
20	0

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

t	F(t)
0	36
5	
10	
15	
20	0

The water depth decreases 36 inches.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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t	F(t)
0	36
5	
10	
15	
20	0

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A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

	t	F(t)
	0	36
ı	5	
ı	10	
ı	15	
4	20	0

The water depth decreases 36 inches in 20 minutes.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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t	F(t)
0	36
5	
10	
15	
20	0

The water depth decreases 36 inches in 20 minutes.

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9. How long will it take to empty the tank? 20 minutes

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

t	F(t)
0	36
5	
10	
15	
20	0

The water depth decreases 36 inches in 20 minutes.

It decreases at 1.8 inches per minute.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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5	
10	
15	
20	0

The water depth decreases 36 inches in 20 minutes.

It decreases at 1.8 inches per minute.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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t	$\mathbf{F}(\mathbf{t})$
0	36
5	
10	
15	
20	0

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It decreases at 1.8 inches per minute.

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t	F(t)
0	36
5	27
10	
15	
20	0

The water depth decreases 36 inches in 20 minutes.

It decreases at 1.8 inches per minute.

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5	27
10	
15	
20	0

The water depth decreases 36 inches in 20 minutes.

It decreases at 1.8 inches per minute.

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10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

ı	t	F(t)
	0	36
	5	27
	10	18
	15	
	20	0

The water depth decreases 36 inches in 20 minutes.

It decreases at 1.8 inches per minute.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

t	F(t)
0	36
5	27
10	18
→ 15	
20	0

The water depth decreases 36 inches in 20 minutes.

It decreases at 1.8 inches per minute.

It decreases 9 inches every 5 minutes.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

t	F(t)
0	36
5	27
10	18
→ 15	9
20	0

The water depth decreases 36 inches in 20 minutes.

It decreases at 1.8 inches per minute.

It decreases 9 inches every 5 minutes.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

9. How long will it take to empty the tank? 20 minutes

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

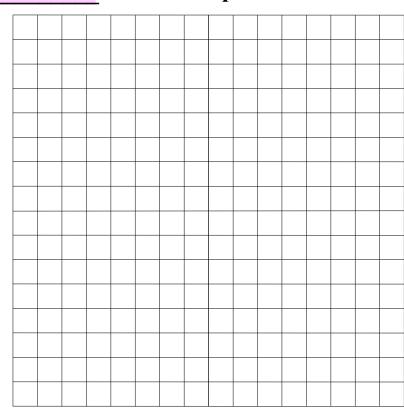
t	F(t)
0	36
5	27
10	18
15	9
20	0

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- 9. How long will it take to empty the tank? 20 minutes
- - 11. Graph function F.

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

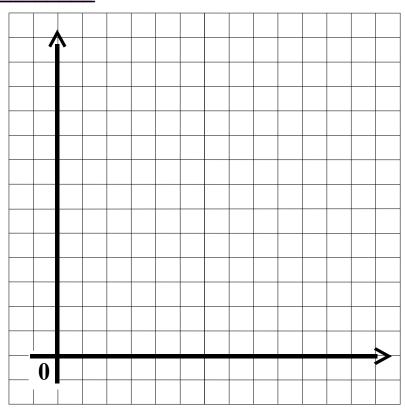
t	F(t)
0	36
5	27
10	18
15	9
20	0



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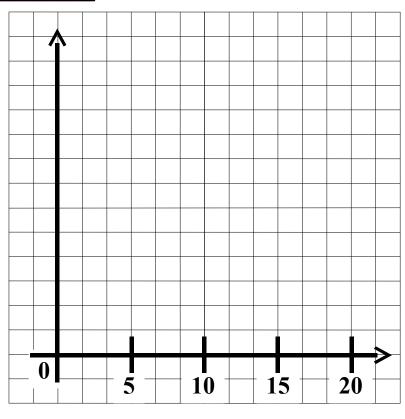
t	F(t)
0	36
5	27
10	18
15	9
20	0



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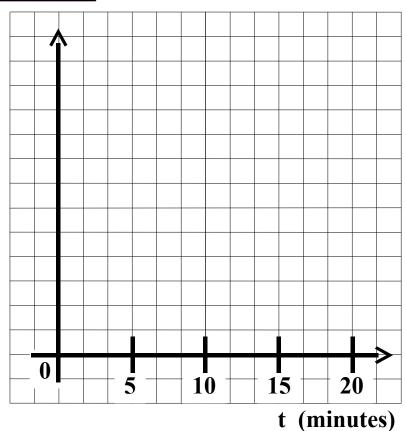
t	F(t)
0	36
5	27
10	18
15	9
20	0



A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in minutes). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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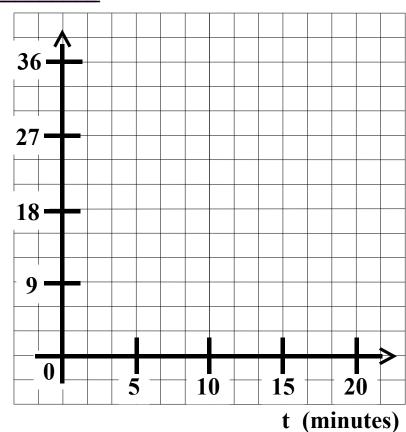
t	F(t)
0	36
5	27
10	18
15	9
20	0



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10	18
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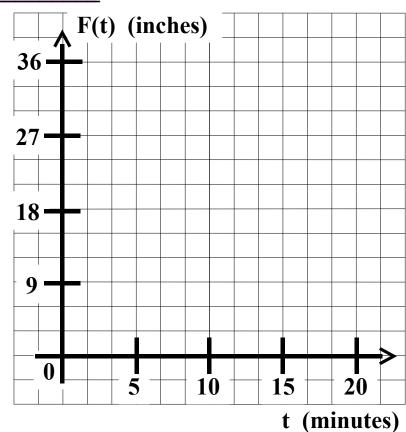


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t	F(t)
0	36
5	27
10	18
15	9
20	0

20 minutes

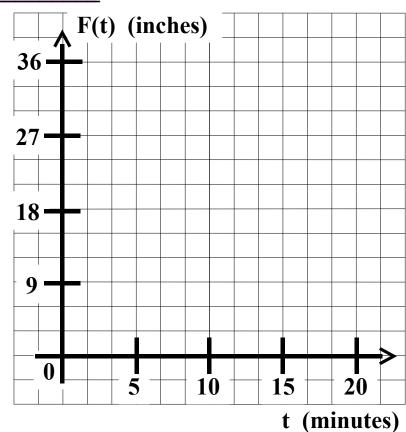


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<u>t</u>	F(t)
→ 0	36
5	27
10	18
15	9
20	0

20 minutes

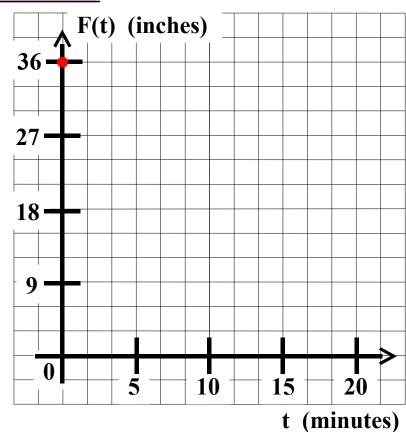


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<u>t</u>	F(t)
→ 0	36
5	27
10	18
15	9
20	0

20 minutes

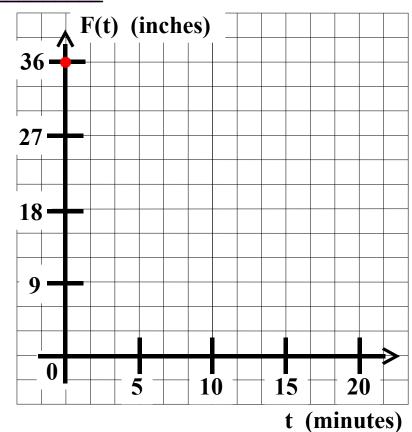


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t	F(t)
0	36
→ 5	27
10	18
15	9
20	0

20 minutes

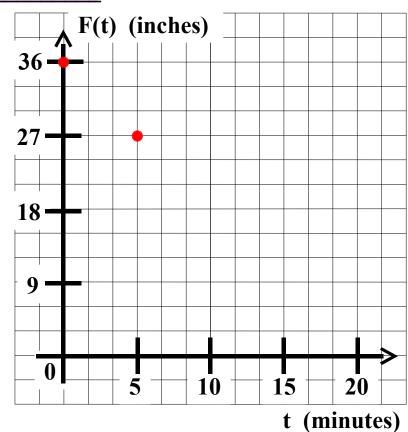


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t	F(t)
0	36
5	27
10	18
15	9
20	0

20 minutes

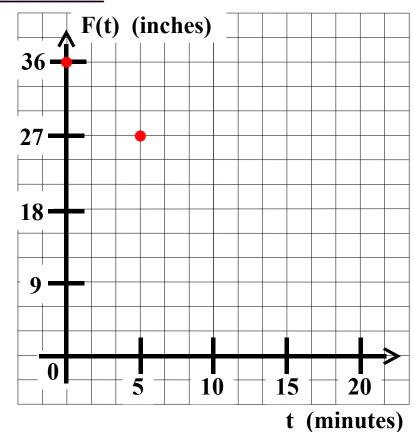


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-	t	F(t)
-	0	36
	5	27
	10	18
	15	9
	20	0

20 minutes

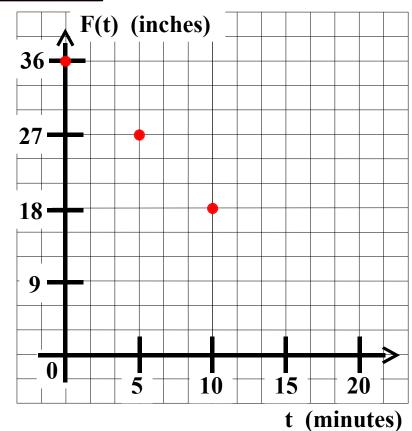


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- 9. How long will it take to empty the tank?
- 10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

<u>t</u>	F(t)
0	36
5	27
→ 10	18
15	9
20	0

20 minutes

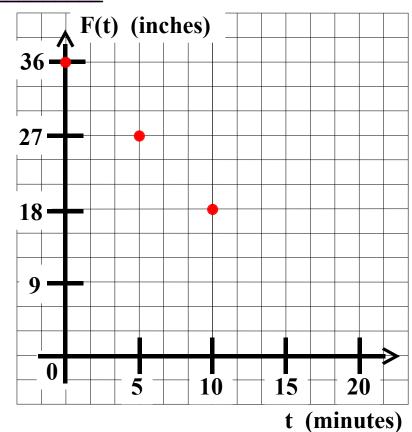


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t	F(t)
0	36
5	27
10	18
15	9
20	0

20 minutes

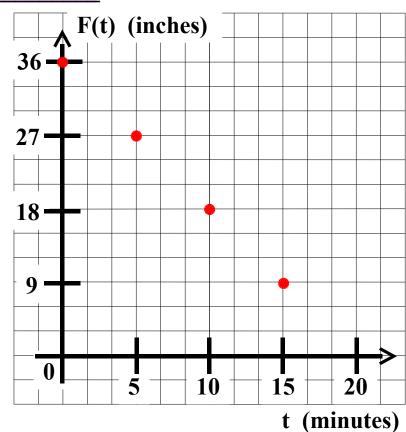


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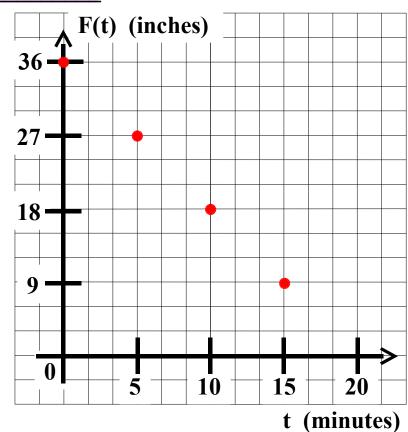


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0	36
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20 minutes

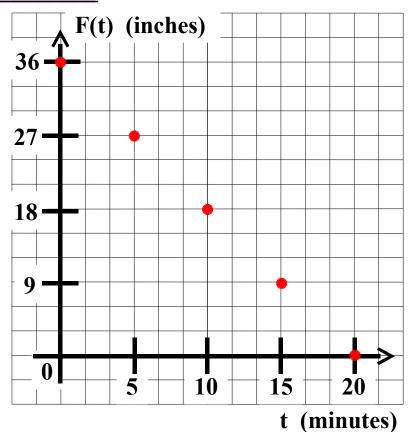


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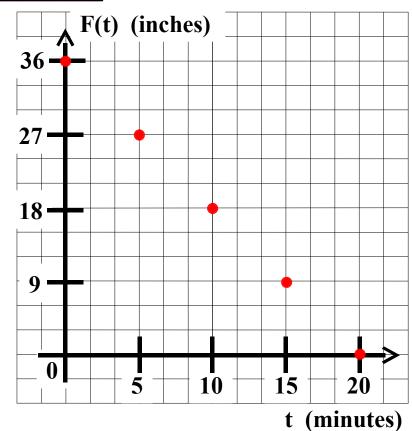


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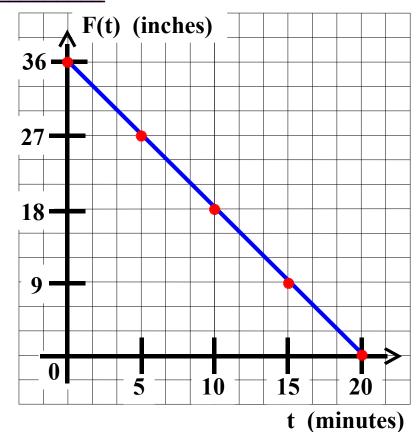


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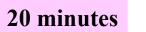


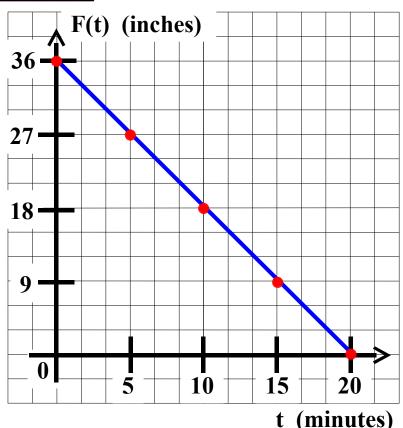
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t	F(t)
0	36
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10	18
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20	0

12. Write an equation giving F(t) in terms of t.





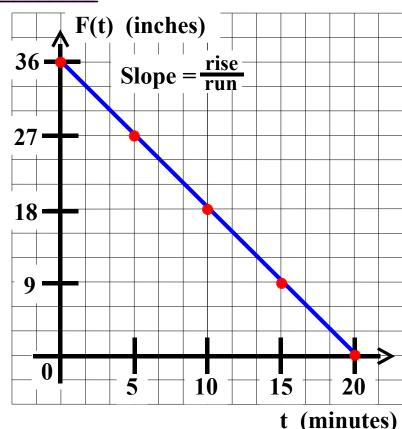
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20 minutes

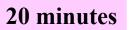


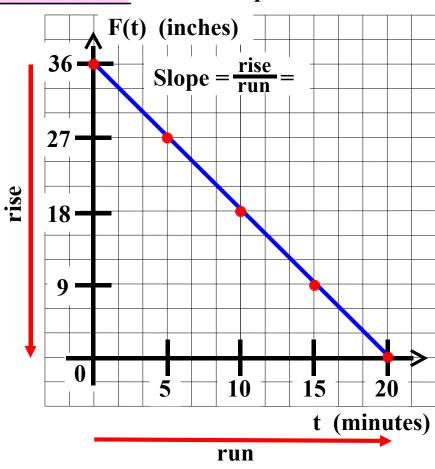
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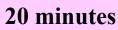


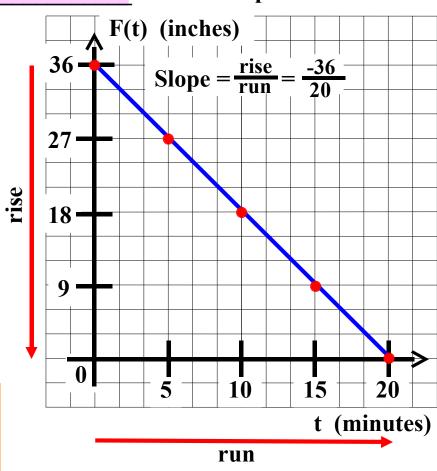
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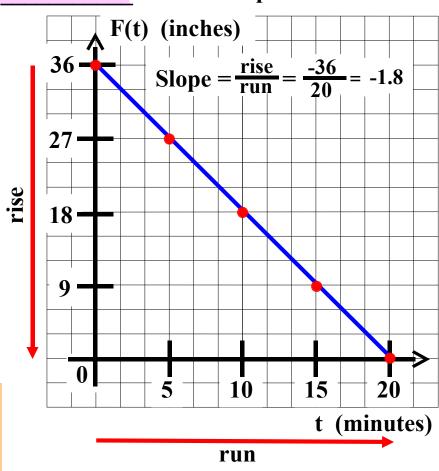
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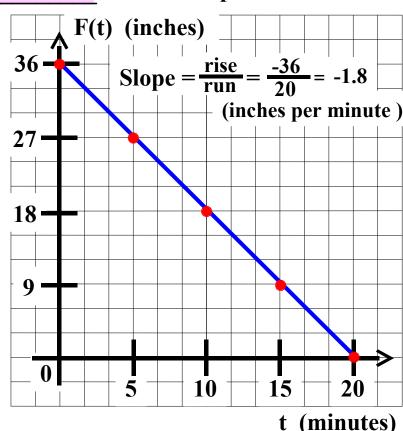
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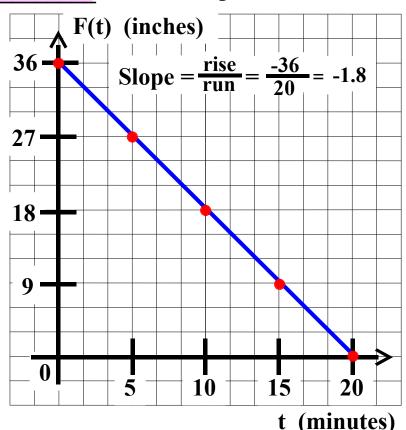
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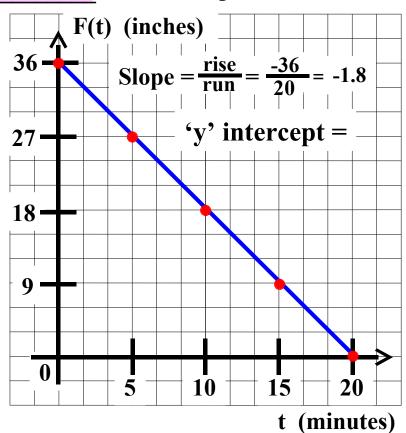
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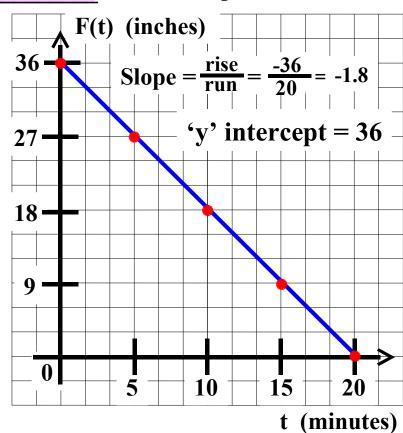
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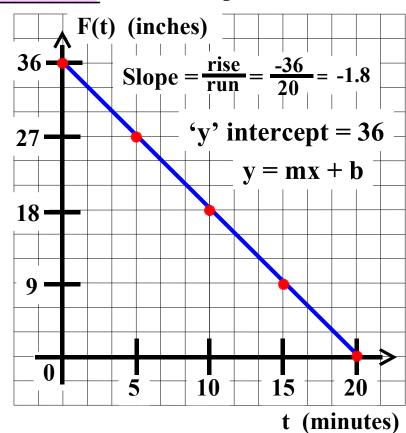
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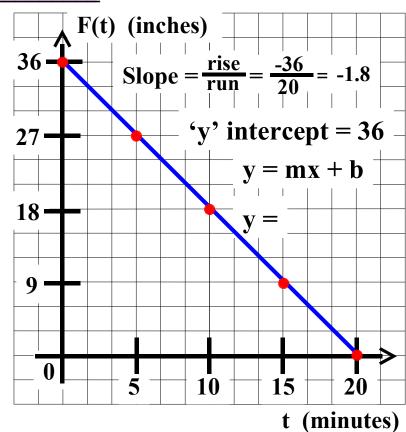
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20 minutes



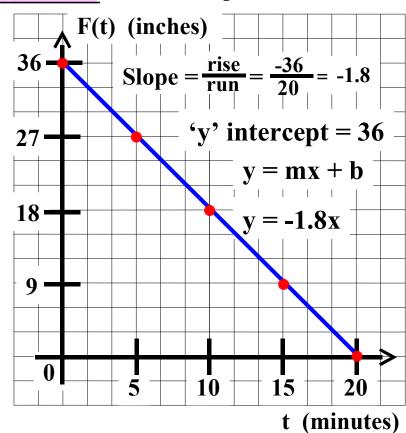
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12. Write an equation giving F(t) in terms of t.

20 minutes



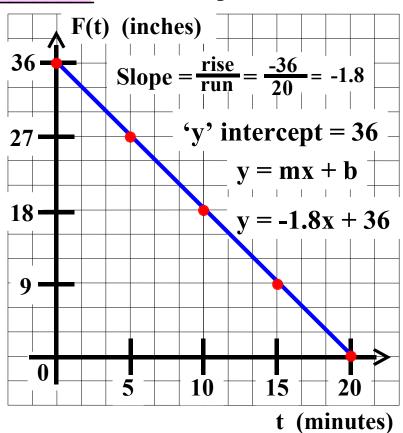
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12. Write an equation giving F(t) in terms of t.

20 minutes



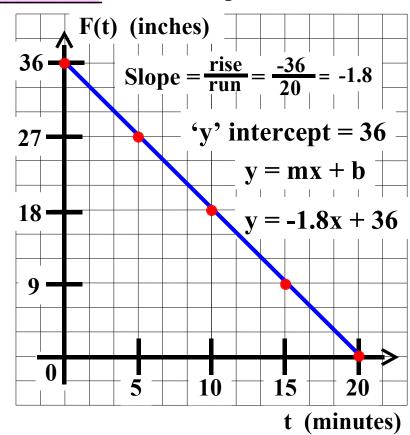
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t	F(t)
0	36
5	27
10	18
15	9
20	0

12. Write an equation giving F(t) in terms of t. F(t) =

20 minutes



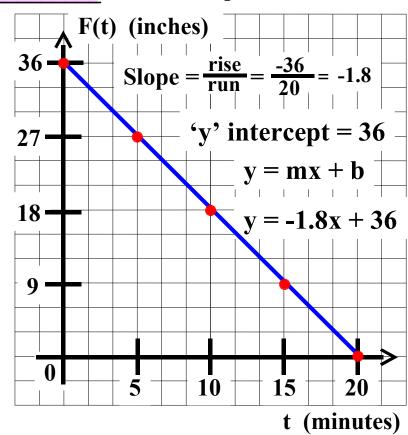
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t	F(t)
0	36
5	27
10	18
15	9
20	0

12. Write an equation giving F(t) in terms of t. F(t) = -1.8t

20 minutes



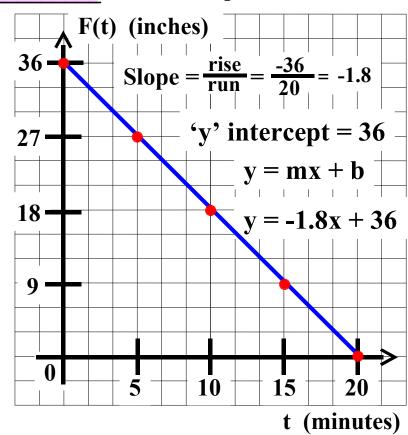
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t	F(t)
0	36
5	27
10	18
15	9
20	0

12. Write an equation giving F(t) in terms of t. F(t) = -1.8t + 36

20 minutes



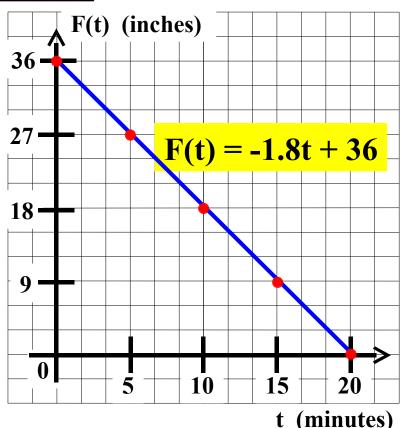
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12. Write an equation giving F(t) in terms of t. F(t) = -1.8t + 36

20 minutes

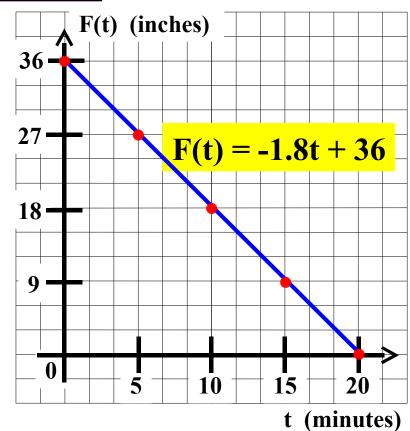


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20 minutes



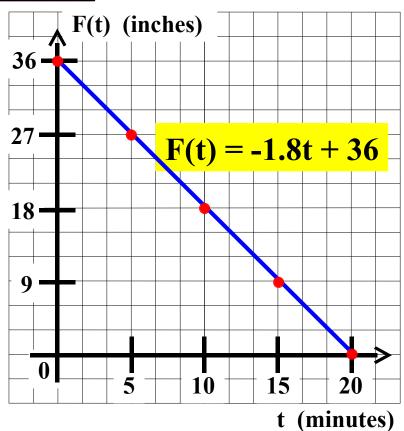
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5	27
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15	9
20	0

20 minutes

11. Graph function F.



13. What is the domain of function F?

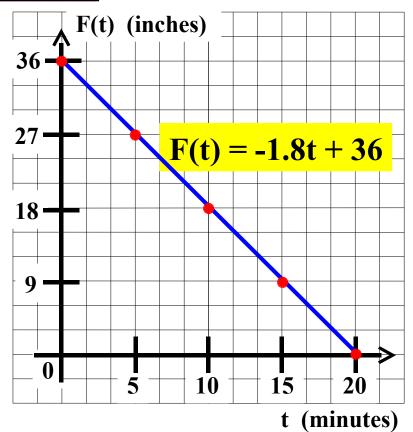
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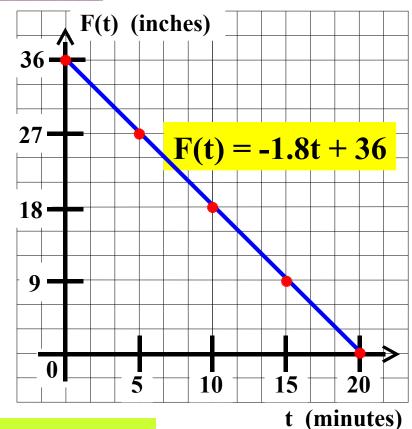
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t	F(t)
0	36
5	27
10	18
15	9
20	0
1	

20 minutes

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[

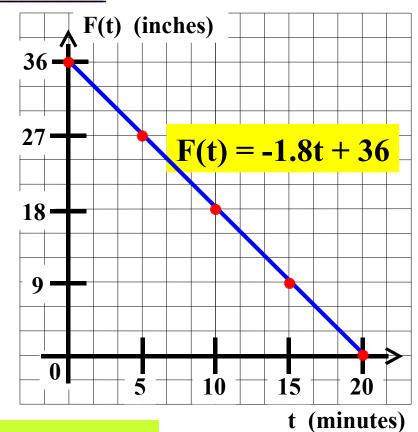
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10	18
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20	0
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20 minutes

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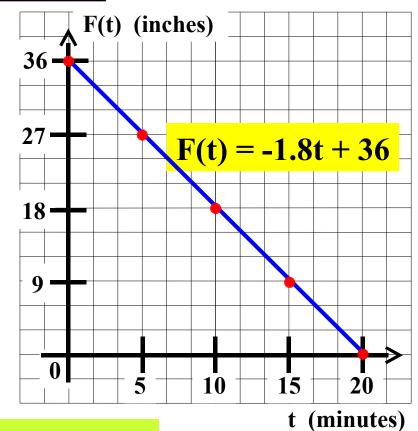
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0	36
5	27
10	18
15	9
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13. What is the domain of function F?

[0, 20]

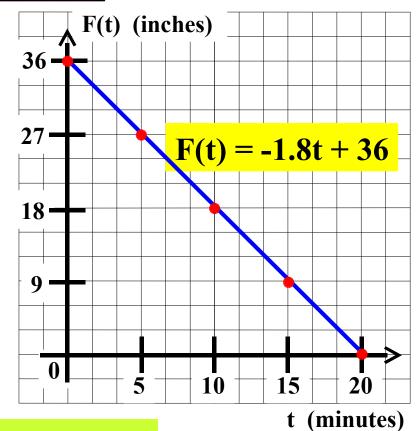
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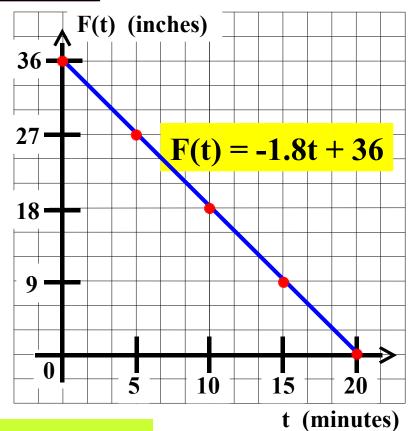
[0, 20]

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15	9
20	0
1	

20 minutes

11. Graph function F.



13. What is the domain of function F?

[0, 20]

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

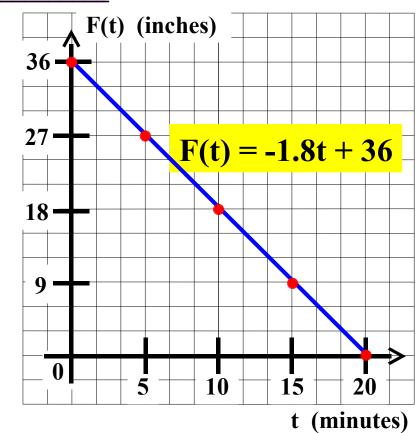
domain

[0, 20]

- 9. How long will it take to empty the tank?
- 10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

t	F(t)
0	36
5	27
10	18
15	9
20	0

20 minutes



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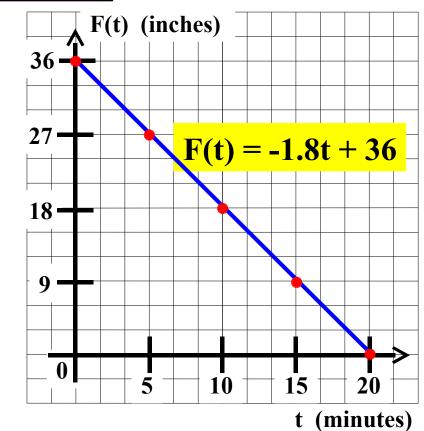
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11. Graph function F.



14. What is the range of function F?

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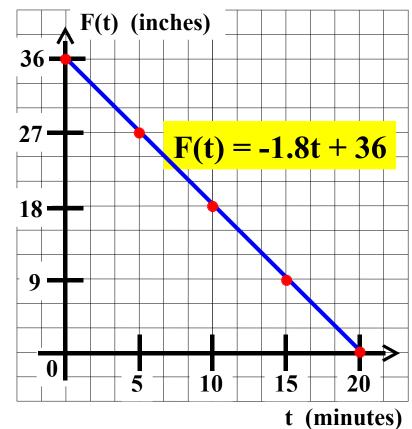
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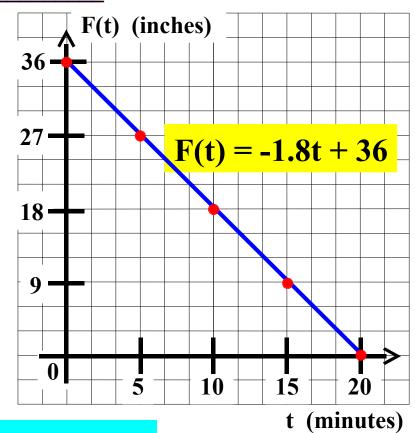
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t	F(t)		[0, 20]
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5	27		
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	1		

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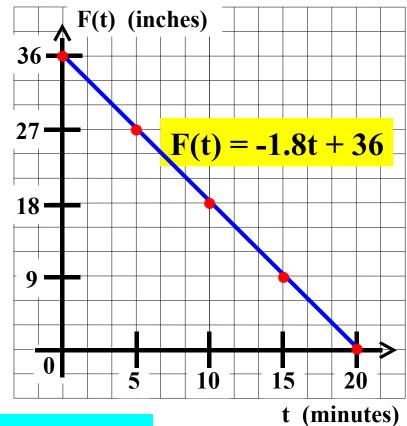
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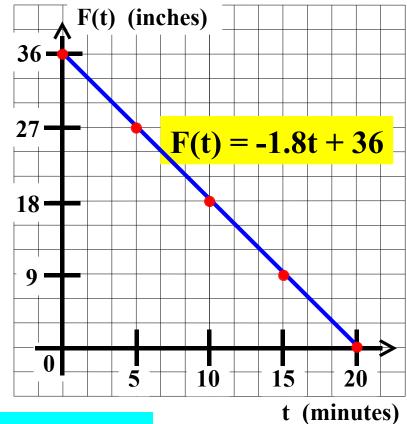
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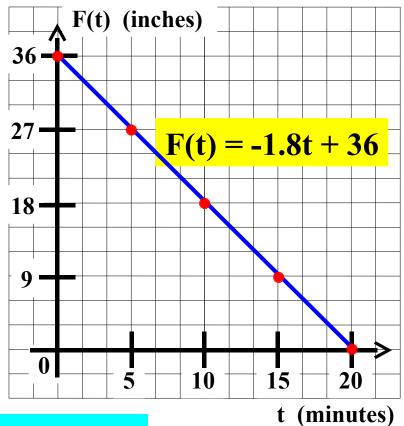
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	1

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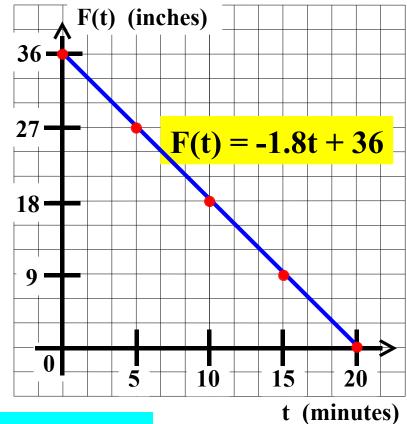
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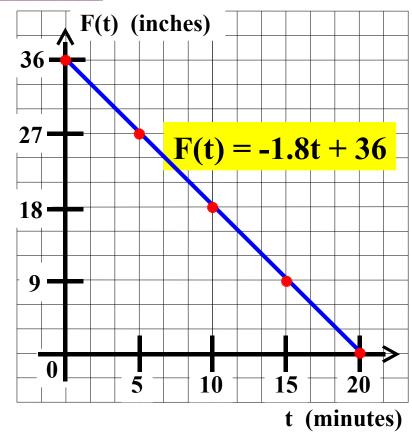
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	vp • J	<u>domain</u>
t	F(t)	[0, 20]
0	36	range
5	27	[0, 36]
10	18	
15	9	

20

20 minutes

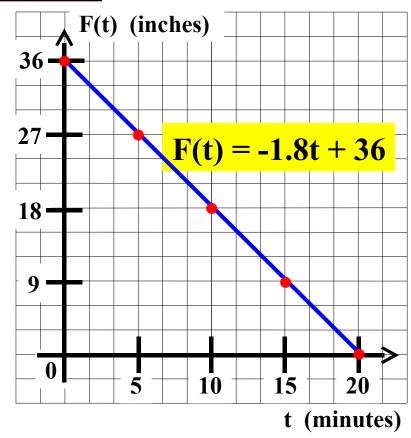


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	-	domain
<u>t</u>	F(t)	[0, 20]
0	36	range
5	27	[0, 36]
10	18	15 Evaluate E(15)
15	9	15. Evaluate F(15).
20	0	

20 minutes



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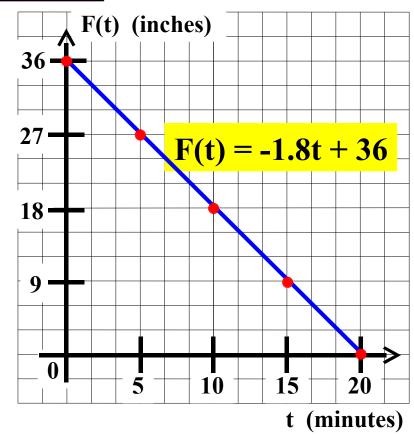
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1 - --- - ---

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<u>t</u>	F(t)	[0, 20]
0	36	range
5	27	[0, 36]
10	18	15 Evaluata E(15)
15	9	15. Evaluate F(15).
20	0	

20 minutes

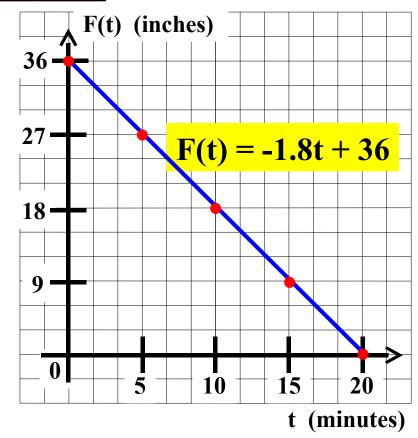


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5	27	[0, 36]
10	18	15. Evaluate F(15).
15	9	13. Evaluate I (13).
20	0	
		F(15) =

20 minutes

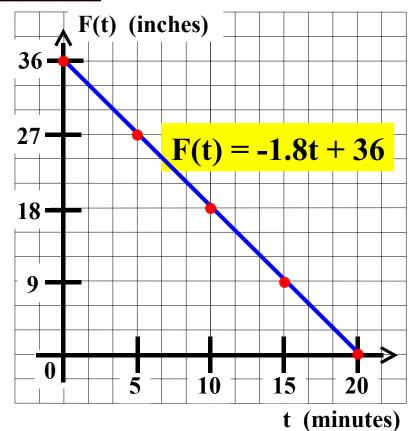


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<u>t</u>	F(t)	[0, 20]
0	36	range
5	27	[0, 36]
10	18	15. Evaluate F(15).
15	9	13. Evaluate F(13).
20	0	
		$\mathbf{F}(15) = 9$

20 minutes



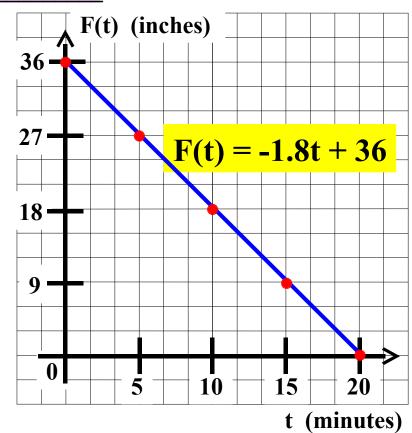
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20 minutes



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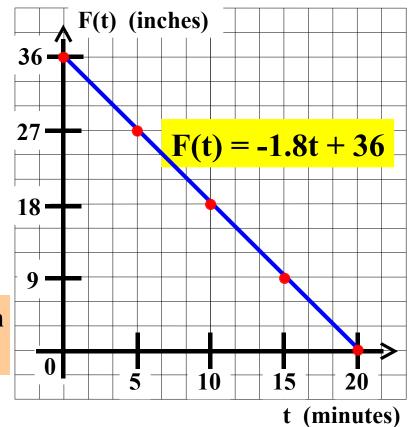
20 minutes

11. Graph function F.

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

ie taiir	c is emp	ory.	domain	
t	F(t)	_	[0, 20]	
0	36		range	
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15 20	9 0	What does terms of the	` ′ -	

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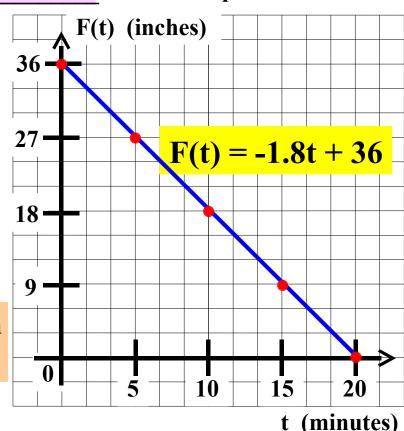
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t	F(t)	_	[0, 20]
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5	27		[0, 36]
10	18	15. Evaluat	te F(15).
15 20	9 0	What does terms of the	F(15) represent in e problem?

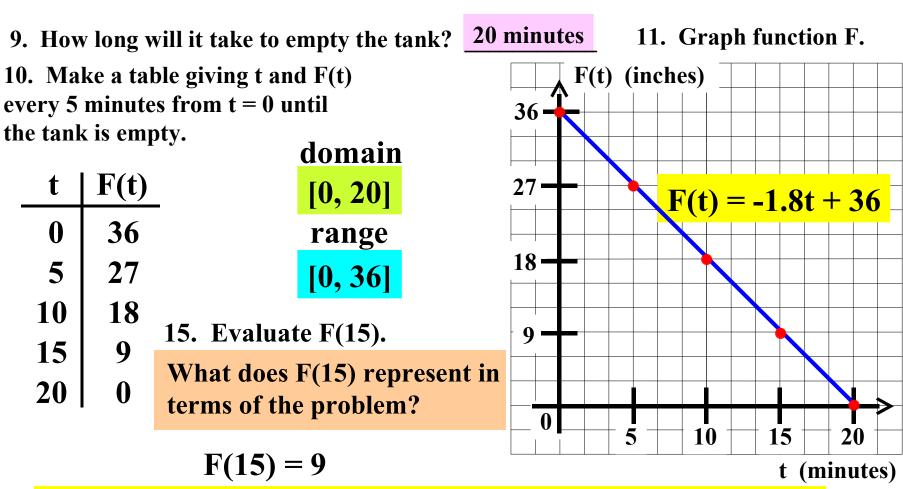


F(15) = 9

t (minutes)

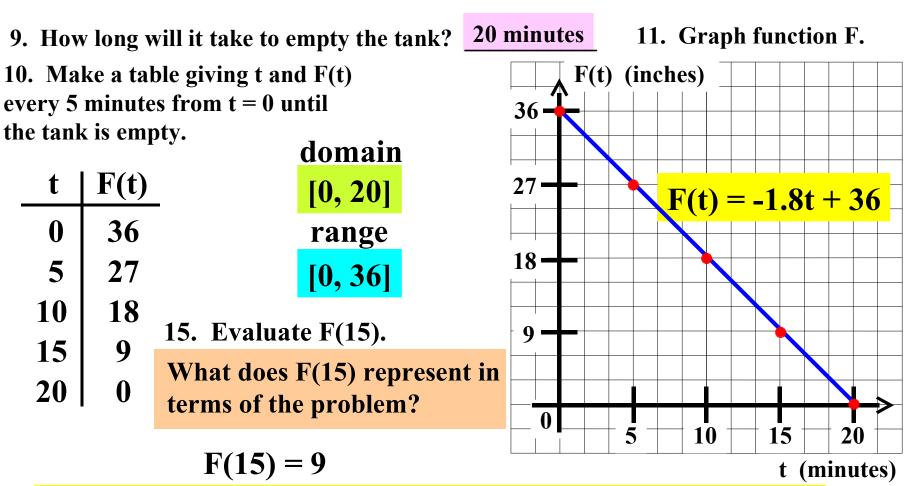
F(15) represents

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F(15) represents the <u>depth of the water</u>

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F(15) represents the <u>depth of the water</u> after 15 minutes.

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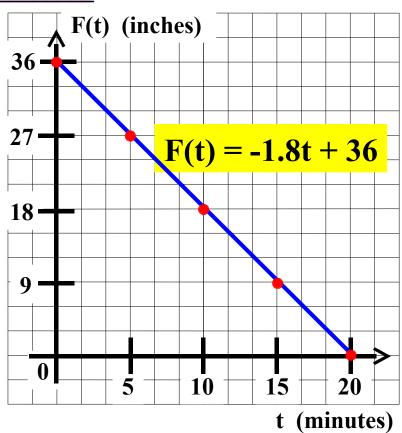
9. How long will it take to empty the tank?

20 minutes

11. Graph function F.

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

	•	v	domain	
t	F(t)	<u>-</u>	[0, 20]	
0	36		range	
5	27		[0, 36]	
10	18	15. Evaluat	to F(15)	
15	9	What does	` ,	rosont in
20	0	terms of the	` ' -	



F(15) = 9 inches

F(15) represents the depth of the water after 15 minutes.

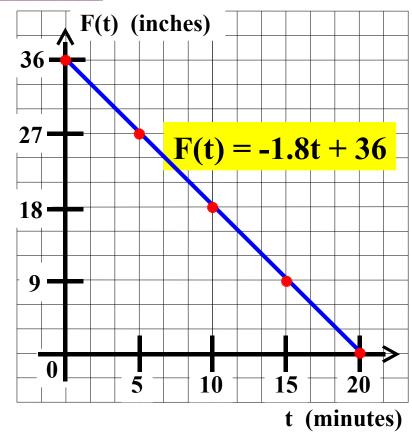
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10	18	
15	9	

20

20 minutes

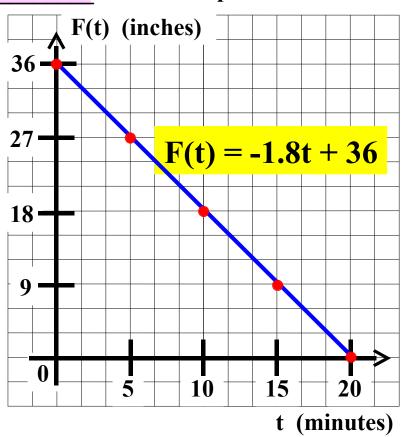


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<u>t</u>	F(t)	[0, 20]
0	36	range
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15	9	the value of t.
20	0	



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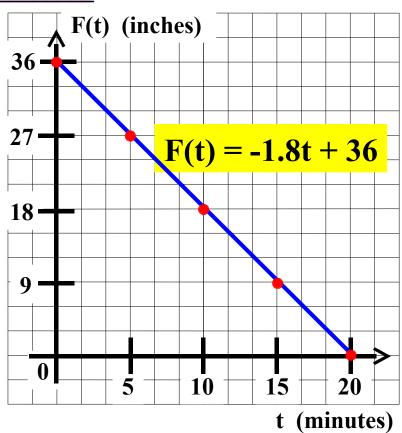
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			gomair
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	4 =	_	101 11 1 (t) 27, the

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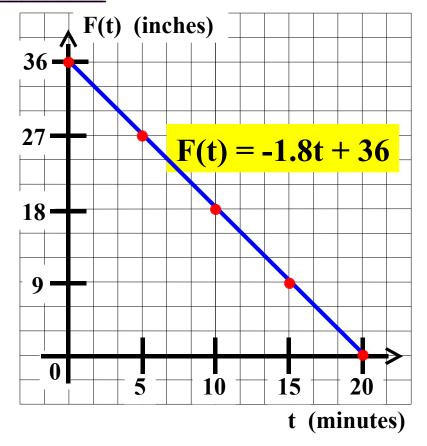
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<u>t</u>	F(t)	[0, 20]
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F(t) = 27



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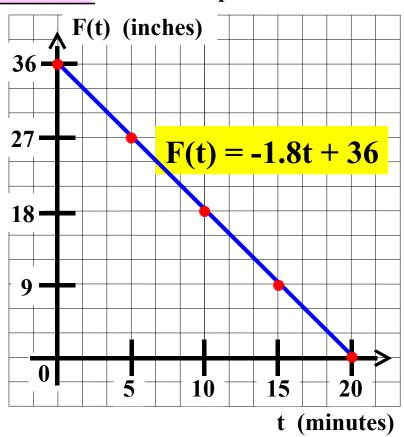
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		•	domain
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	5	27	[0, 36]
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	20	0	

 $F(t) = 27 \implies t =$



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20 minutes

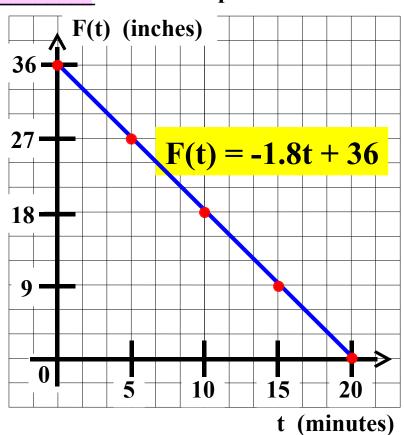
- 9. How long will it take to empty the tank?
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	0	36	range
	5	27	[0, 36]
	10	18	16. If $F(t) = 27$, then find
	15	9	the value of t.
	20	0	

 $\mathbf{F(t)} = 27 \implies \mathbf{t} = \mathbf{5}$



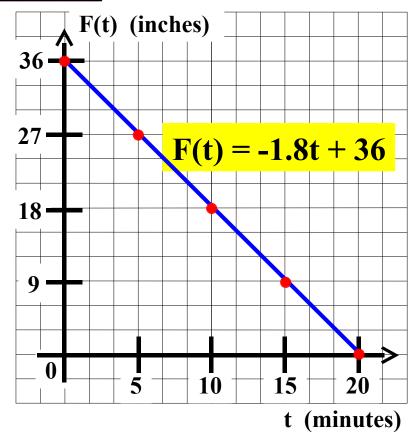
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20 minutes



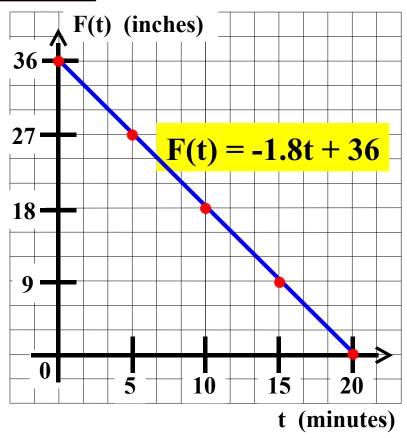
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ne tank is empty.		domain		
<u>t</u>	F(t)	[0, 20]		
0	36	range		
5	27	[0, 36]		
10	18	16. If $F(t) = 27$, then find		
15	9	the value of t.		
20	0	What does this value of t		
represent in terms of the				
problem?				

 $F(t) = 27 \implies t = 5$



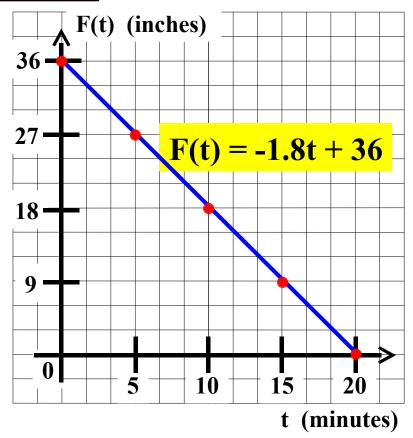
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- 20 minutes 11. Graph function F.

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ic tunk is empty.		domain		
<u>t</u>	F(t)	[0, 20]		
0	36	range		
5	27	[0, 36]		
10	18	16. If $F(t) = 27$, then find		
15	9	the value of t.		
20	0	What does this value of t		
	represent in terms of the			
problem?		problem?		

 $\mathbf{F(t)} = \mathbf{27} \implies \mathbf{t} = \mathbf{5}$



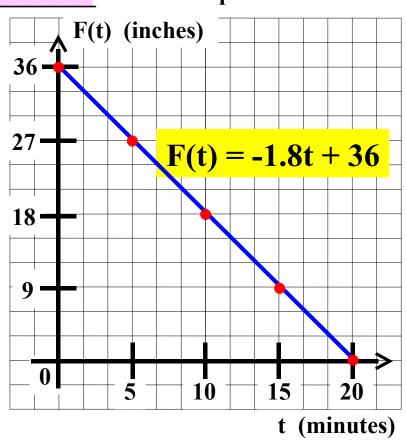
This represents the time

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- 20 minutes
- 11. Graph function F.

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

	•	<u>domain</u>		
t	F(t)	[0, 20]		
0	36	range		
5	27	[0, 36]		
10	18	16. If $F(t) = 27$, then find		
15	9	the value of t.		
20	0	What does this value of t		
represent in terms of the				
problem?				
	$F(t) = 27 \implies t = 5$			



This represents the time it took for the water to be 27 inches deep.

A rectangular water tank is 10 feet long, 4 feet wide, and 3 feet deep. The tank is full initially and water is drained out of the tank at 6 cubic feet per minute until the tank is empty. Let t represent the time that water has been draining out of the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

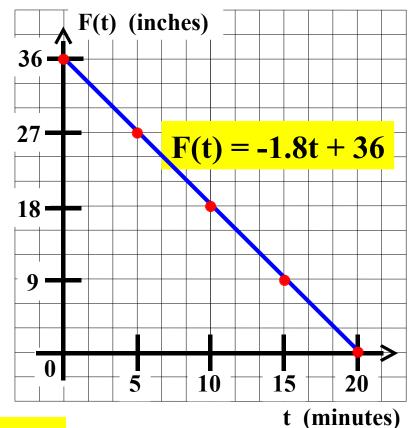
9. How long will it take to empty the tank?

20 minutes

11. Graph function F.

10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

		domain		
<u>t</u>	F(t)	[0, 20]		
0	36	range		
5	27	[0, 36]		
10	18	16. If $F(t) = 27$, then find		
15	9	the value of t.		
20	0	What does this value of t		
represent in terms of the				
problem?				



 $F(t) = 27 \implies t = 5 \text{ minutes}$

This represents the time it took for the water to be 27 inches deep.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

17. How long will it take to fill the tank? _____

V = LWH

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

$$V = LWH$$

$$V =$$

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

$$V = LWH$$

 $V = (8 \text{ ft.})(5 \text{ ft.})(3 \text{ ft.})$

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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17. How long will it take to fill the tank?

60 cubic feet must be added to fill the tank.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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17. How long will it take to fill the tank?

$$V = LWH$$
 $V = (8 \text{ ft.})(5 \text{ ft.})(3 \text{ ft.})$
 $V = 120 \text{ cu. ft.}$

60 cubic feet must be added to fill the tank.

$$Time =$$

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

17. How long will it take to fill the tank? _____

$$V = LWH$$
 $V = (8 \text{ ft.})(5 \text{ ft.})(3 \text{ ft.})$
 $V = 120 \text{ cu. ft.}$

60 cubic feet must be added to fill the tank.

Time = 60 cu. ft.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

17. How long will it take to fill the tank?

60 cubic feet must be added to fill the tank. Time = 60 cu. ft. \div 2 cu. ft. per min.

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17. How long will it take to fill the tank?

$$V = LWH$$
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60 cubic feet must be added to fill the tank.

Time = 60 cu. ft. $\div 2$ cu. ft. per min.

Time =

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

17. How long will it take to fill the tank?

60 cubic feet must be added to fill the tank.

Time = 60 cu. ft. $\div 2$ cu. ft. per min.

Time = 30 minutes

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

17. How long will it take to fill the tank? 30 minutes

60 cubic feet must be added to fill the tank.

Time = 60 cu. ft. $\div 2$ cu. ft. per min.

Time = 30 minutes

- 17. How long will it take to fill the tank? 30 minutes
- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

- 17. How long will it take to fill the tank? 30 minutes
- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)

- 17. How long will it take to fill the tank? 30 minutes
- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)
0	
5	
10	
15	
20	
25	
30	

- 17. How long will it take to fill the tank? 30 minutes
- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

_		
	t	F(t)
	0	
	5	
	10	
	15	
	20	
	25	
	30	

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

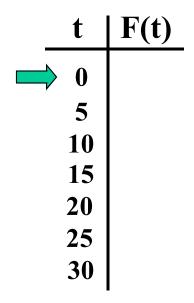
- 17. How long will it take to fill the tank? 30 minutes
- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)
0	
5	
10	
15	
20	
25	
30	

When t = 0, the tank is half full.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

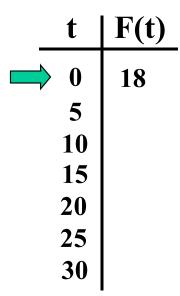
- 17. How long will it take to fill the tank? 30 minutes
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When t = 0, the tank is half full. The water is 18 inches deep.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)
0	18
5	
10	
15	
20	
25	
⇒ 30	

When t = 0, the tank is half full. The water is 18 inches deep.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

- 17. How long will it take to fill the tank? 30 minutes
- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)
0	18
5	
10	
15	
20	
25	
30	

When t = 0, the tank is half full. The water is 18 inches deep.

When t = 30, the tank is full.

- 17. How long will it take to fill the tank? 30 minutes
- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	When $t = 0$, the tank is half full
0 5	The water is 18 inches deep.
10	The water is 10 menes deep.
15 20	When $t = 30$, the tank is full.
25	The water is 36 inches deep.
→ 30	

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

- 17. How long will it take to fill the tank? 30 minutes
- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

<u>t</u>	F(t)	7
0	18	•
5		,
10		
15		
20		
25		
→ 30	36	

When t = 0, the tank is half full. The water is 18 inches deep.

When t = 30, the tank is full. The water is 36 inches deep.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

17. How long will it take to fill the tank? 30 minutes

18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)
0	18
5	
10	
15	
20	
25	
30	36

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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t	F(t)
0	18
5	
10	
15	
20	
25	
30	36

The water depth increases 18 inches.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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t	F(t)
0	18
5	
10	
15	
20	
25	
→ 30	36

The water depth increases 18 inches in 30 minutes.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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- 18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)
0	18
5	
10	
15	
20	
25	
→ 30	36

The water depth increases 18 inches in 30 minutes.

It increases at 0.6 inches per minute.

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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t	F(t)
0	18
5	
10	
15	
20	
25	
→ 30	36

The water depth increases 18 inches in 30 minutes.

It increases at 0.6 inches per minute.

It increases 3 inches every 5 minutes.

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5	
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0	18
5	21
10	
15	
20	
25	
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t	F(t)
0	18
5	21
10	24
15	
20	
25	
30	36

The water depth increases 18 inches in 30 minutes.

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27
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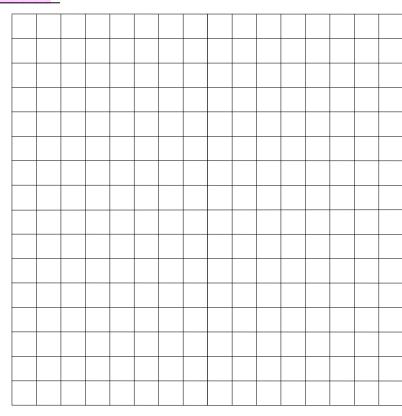
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5	21
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19. Graph function F.

t	F(t)
0	18
5	21
10	24
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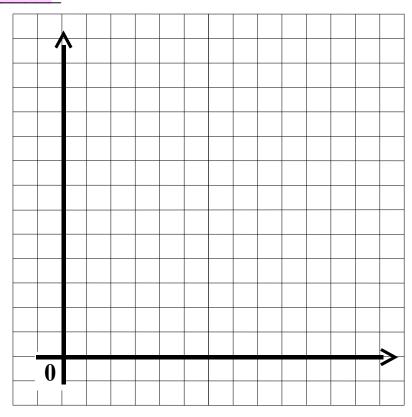


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30	36

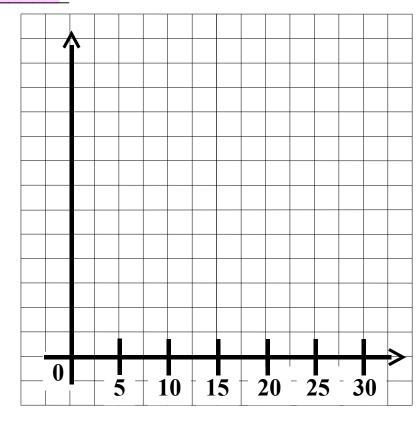


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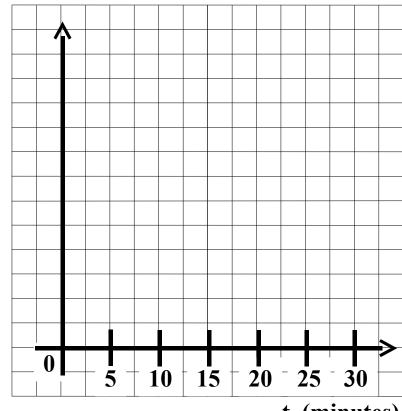
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25	33
30	36



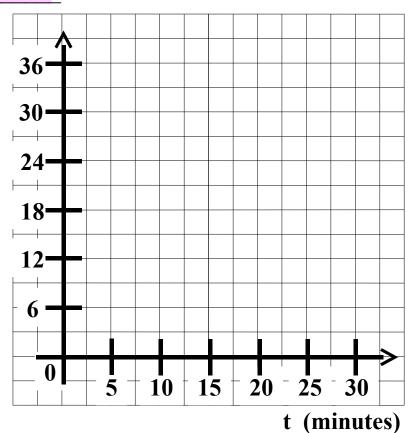
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17. How long will it take to fill the tank? 30 minutes

19. Graph function F.

t	F(t)
0	18
5	21
10	24
15	27
20	30
25	33
30	36

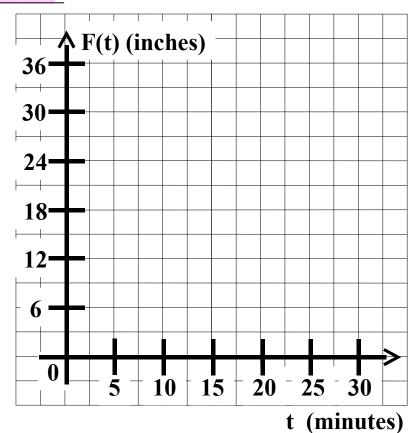


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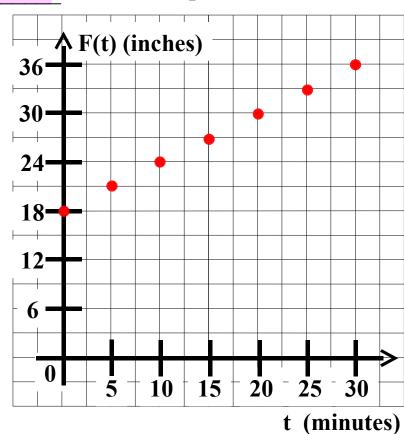


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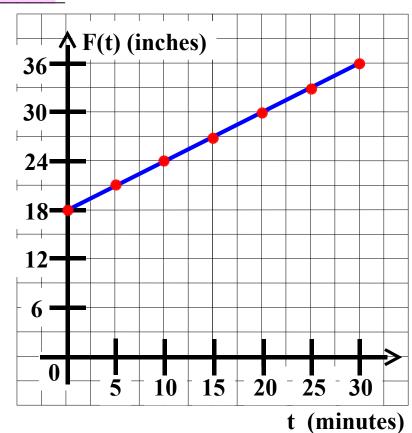


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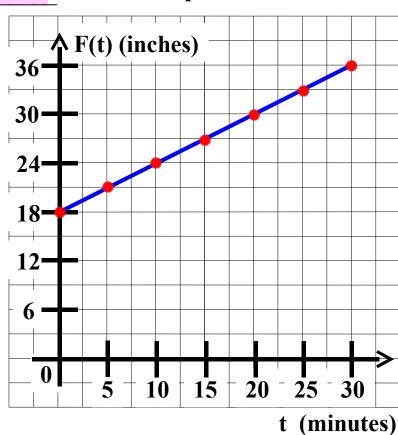
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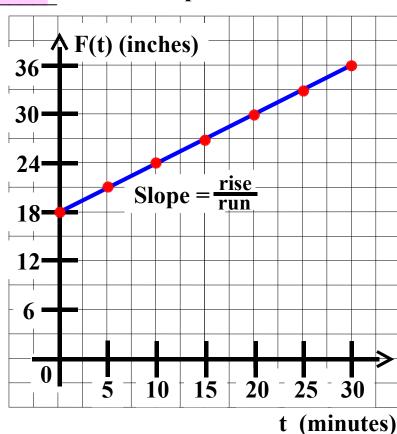
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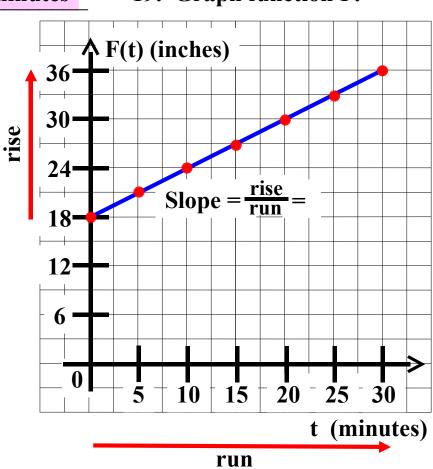
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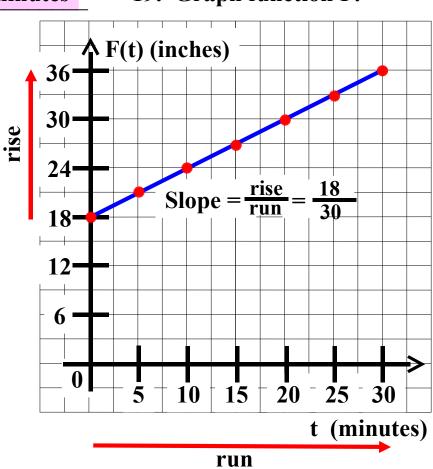
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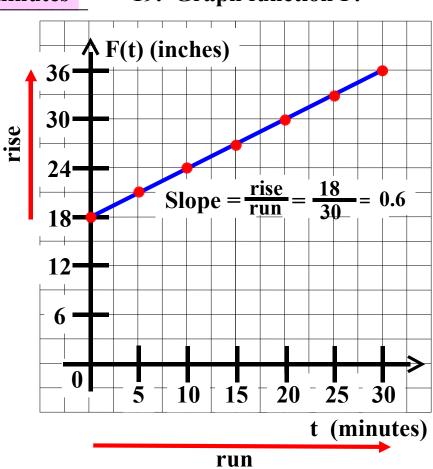
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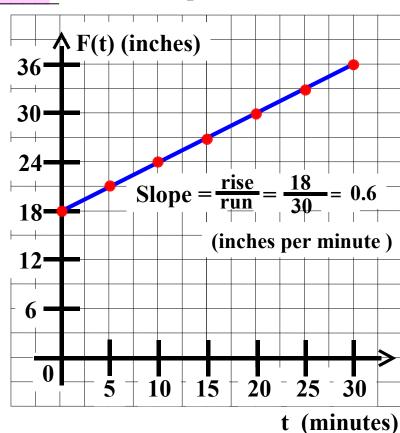
17. How long will it take to fill the tank?

20	min	4
JU		utes

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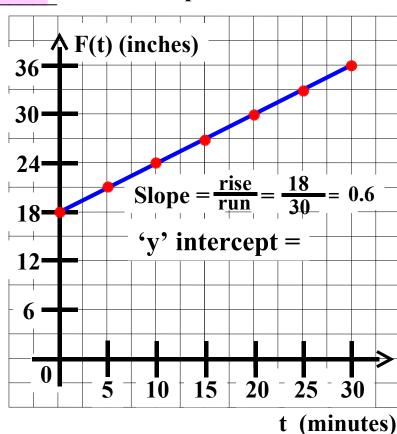
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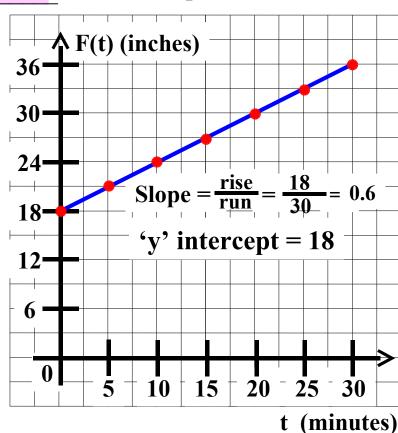


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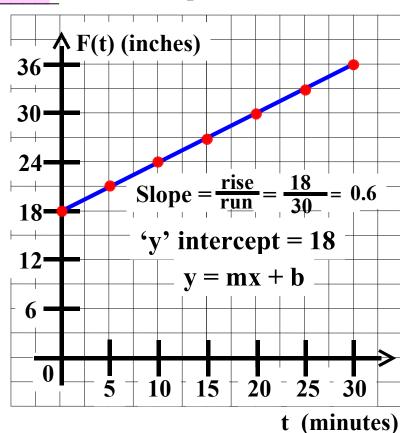
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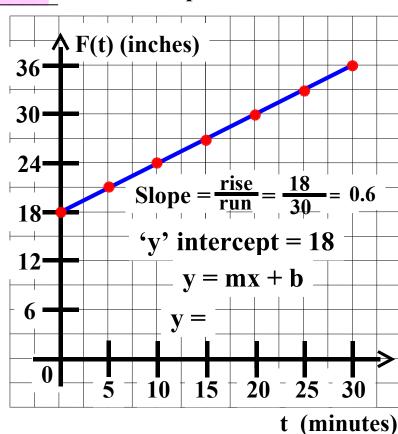
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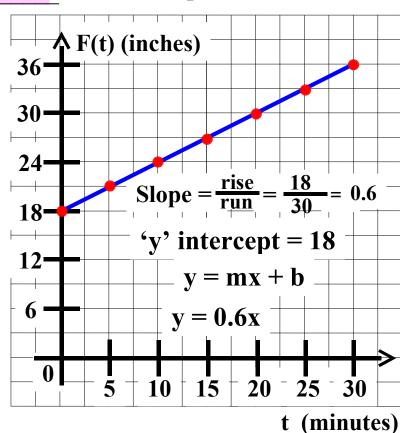
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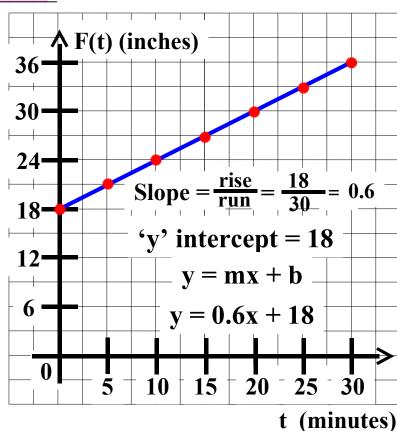
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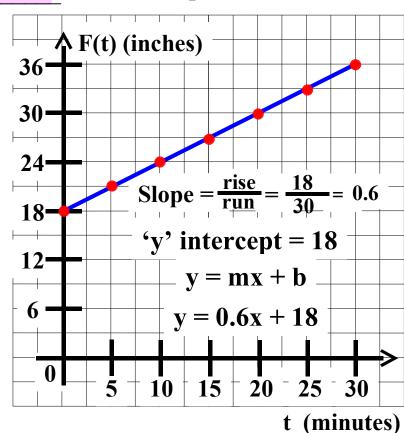
17. How long will it take to fill the tank?

20	min	400
JU		utes

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0	18
5	21
10	24
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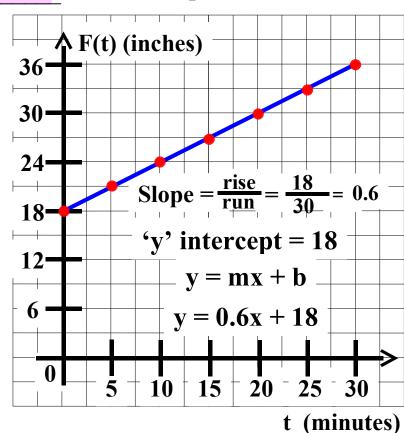
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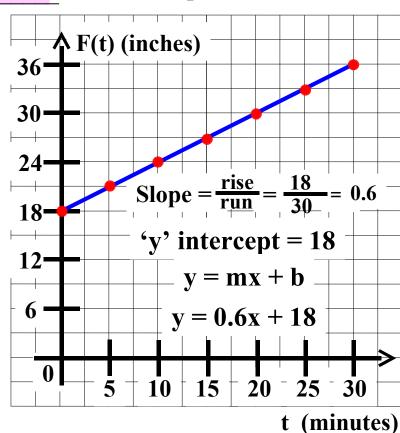
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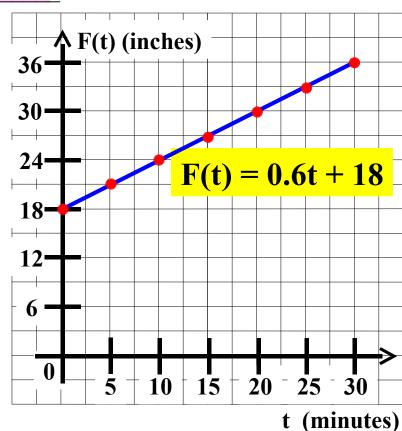
20	min	400
JU		utes

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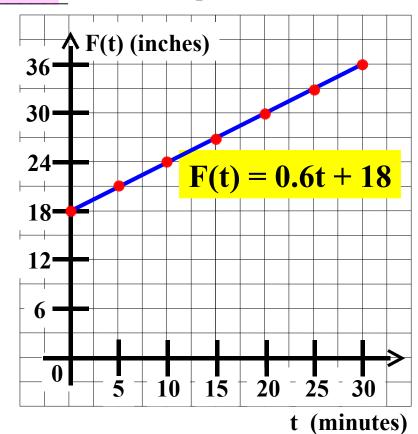


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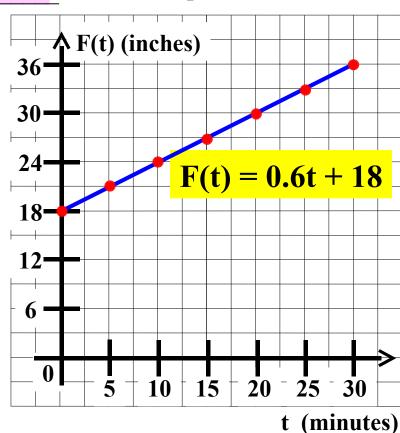


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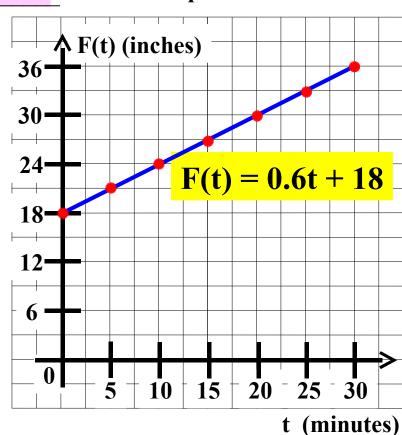
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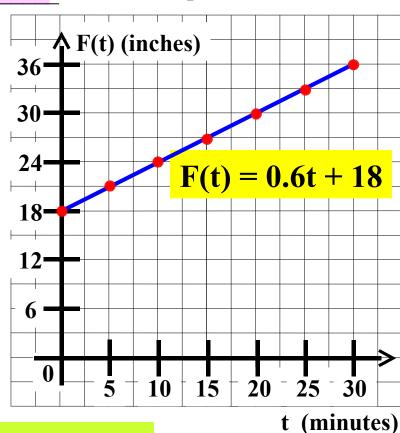
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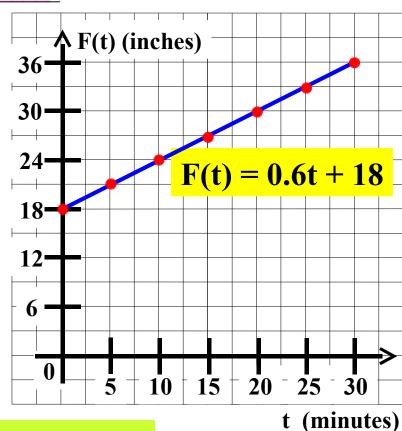
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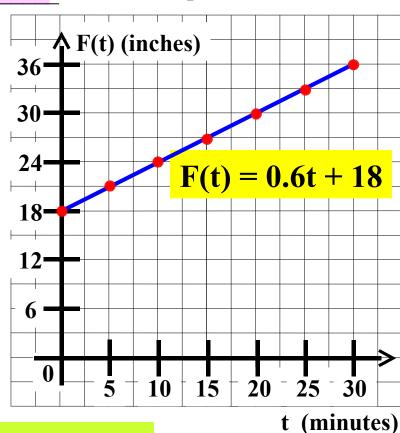
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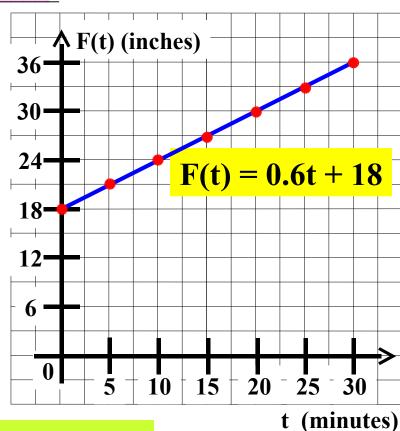
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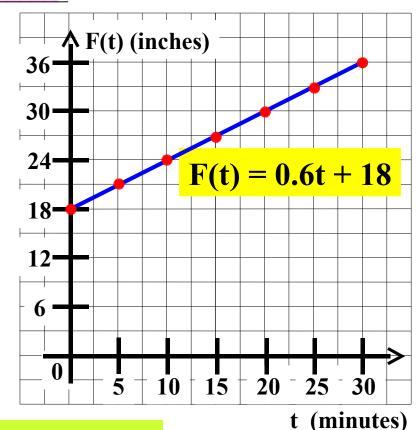
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the tank is full.		K 15 Tull.	domain
	t	F(t)	domain
-	0 5 10 15 20 25	18 21 24 27 30 33	[0, 30]
	30	36	
		-	



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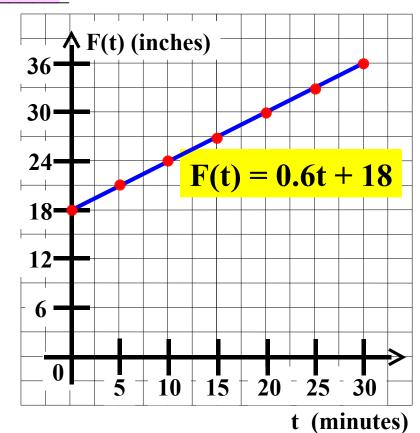
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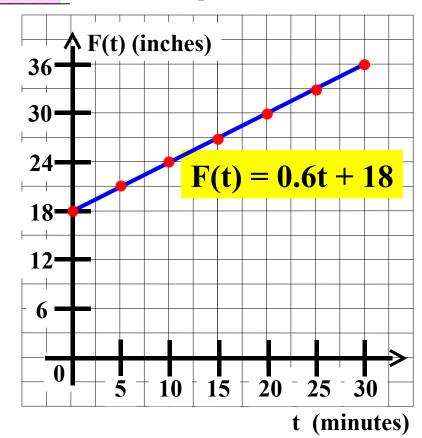
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In



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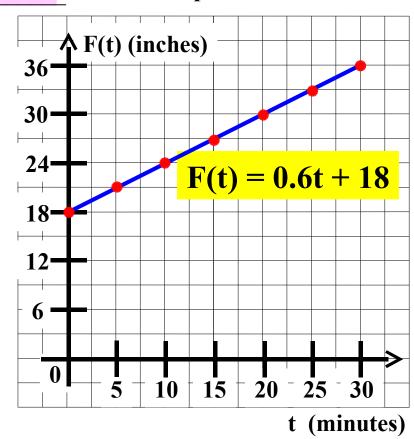
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me tai	ik is iu	
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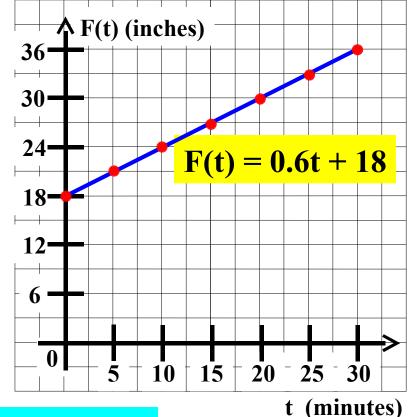
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18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full

me tank is fun.		II.
t	$\mathbf{F}(\mathbf{t})$	domain
0 5 10 15 20 25 30	18 21 24 27 30 33 36	[0, 30]
'	1	



22. What is the range of function F?



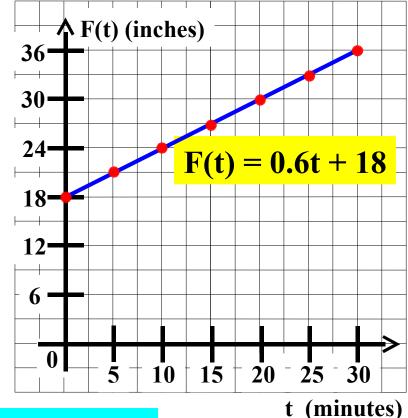
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[18, 36

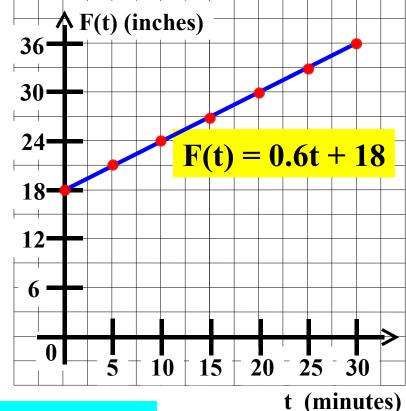
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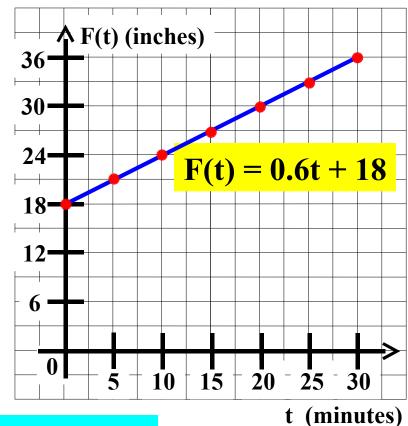
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		_	[0,30]
0	18		range
5	21		
10	24		[18, 36]
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20	30		
25	33		
30	36		
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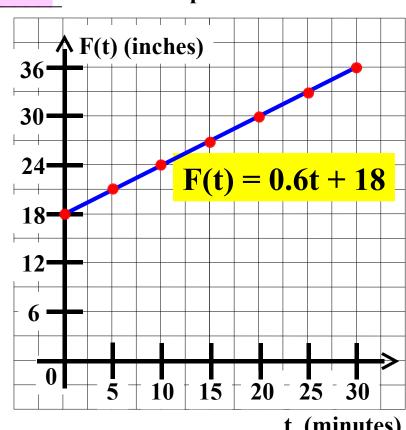
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t	F(t)
0	18
5	21
10	24
15	27
20	30
25	33
30	36

domain [0, 30]range [18, 36]



t (minutes)

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

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t	$\mathbf{F}(\mathbf{t})$	domain
0 5	18 21	[0, 30] range
10	24	[18, 36]
15 20	27 30	23. Evaluate F(10).
25 30	33 36	

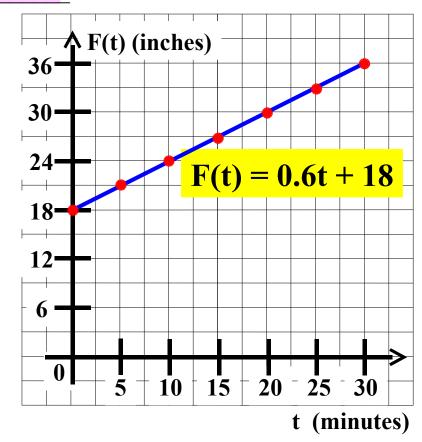
↑ F(t) (inches) 36-30-24-F(t) = 0.6t + 1818-12-6 -**10** 15 **20** 30 t (minutes)

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k 13 10. F(t)		<u>domain</u>
18	_	[0, 30] range
21 24		[18, 36]
27 30	23.	Evaluate F(10).
33 36		
	F(t) 18 21 24 27 30	18 21 24 27 30 23.

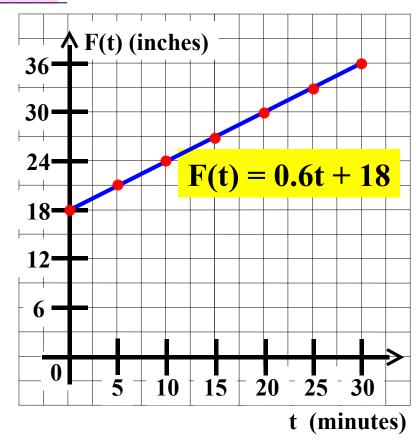


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0 5	18 21	[0, 30] range
10	24	[18, 36]
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20	30	23. Evaluate I (10).
25	33	
30	36	
·	•	$\mathbf{F}(10) =$

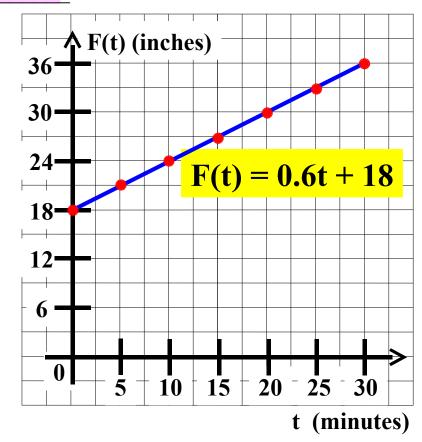


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t	F(t)	domain
0 5	18 21	[0, 30] range [18, 36]
10 15 20 25	24 27 30 33	23. Evaluate F(10).
30	36	F(10) = 24



A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is half full initially and water is pumped into the tank at 2 cubic feet per minute until the tank is full. Let t represent the time that water has been pumped into the tank (in **minutes**). Let F(t) represent the **depth of the water** in the tank (in **inches**).

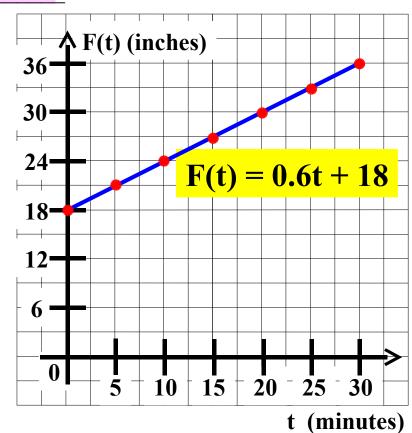
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19. Graph function F.

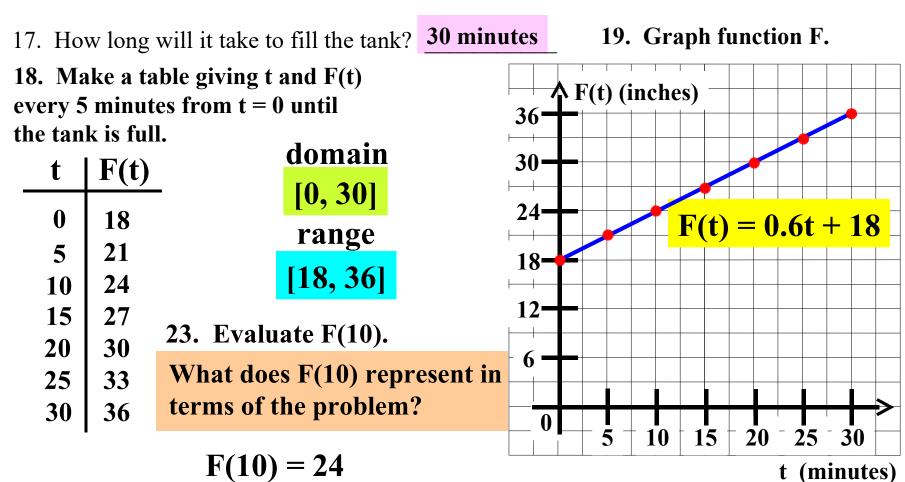
18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)		domain
	10	•	[0,30]
0	18		range
5	21		
10	24		[18, 36]
15	27	22 Evolu	1040 E(10)
20	30	23. Evalu	ate F(10).
25	33		
30	36		

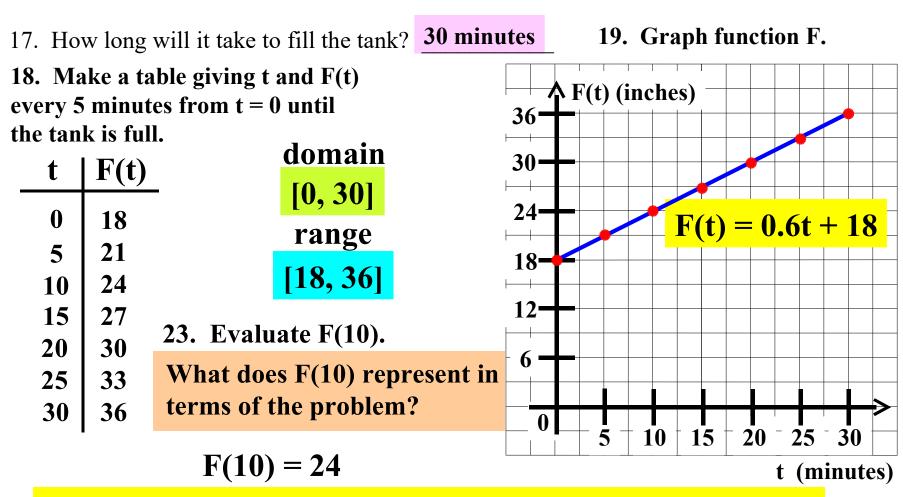
F(10) = 24



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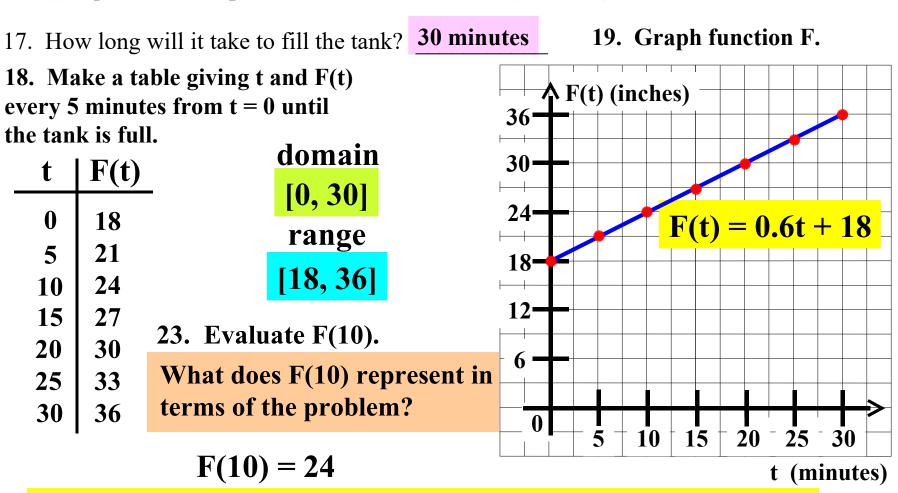


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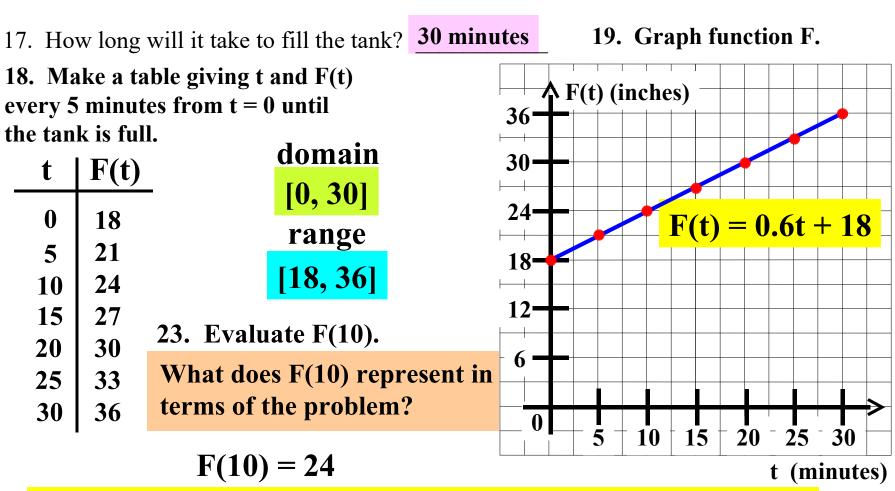
F(10) represents

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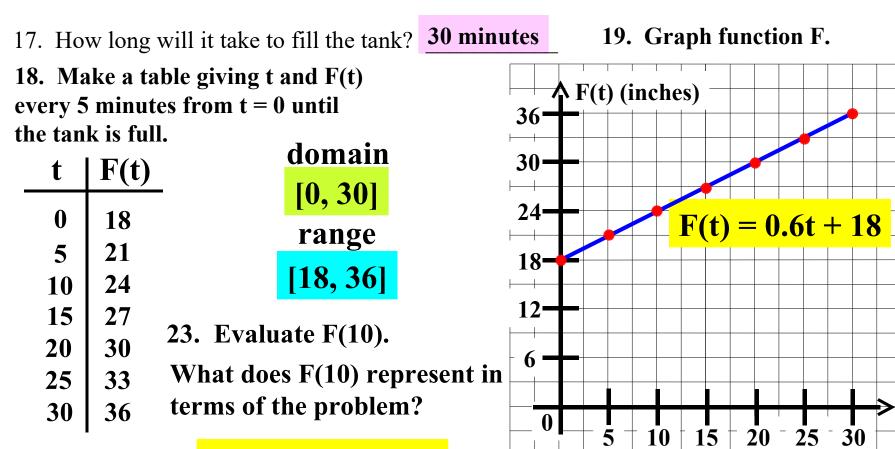
F(10) represents the <u>depth of the water</u>

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F(10) represents the <u>depth of the water</u> after 10 minutes.

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F(10) represents the <u>depth of the water</u> after 10 minutes.

t (minutes)

F(10) = 24 inches

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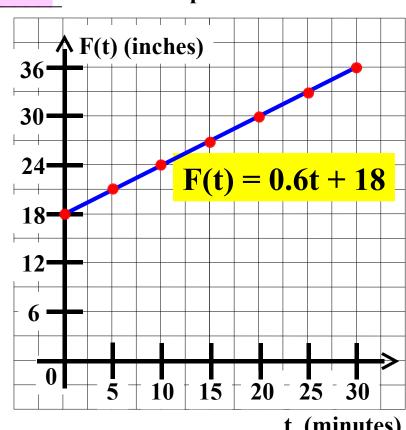
17. How long will it take to fill the tank? 30 minutes

19. Graph function F.

18. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is full.

t	F(t)
0	18
5	21
10	24
15	27
20	30
25	33
30	36

domain [0, 30]range [18, 36]



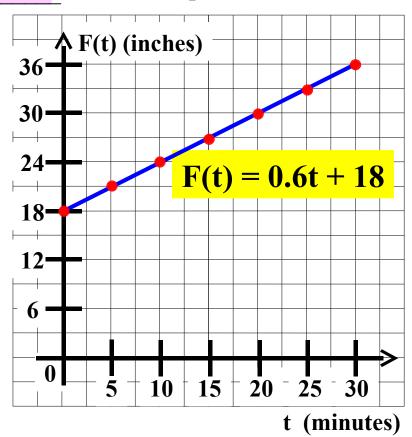
t (minutes)

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tne tan	K IS TUI			
t	F(t)	<u>domain</u>		
0 5 10	18 21 24	[0, 30] range [18, 36]		
15 20 25 30	27 30 33 36	24. If F(t) = 30, then find the value of t.		

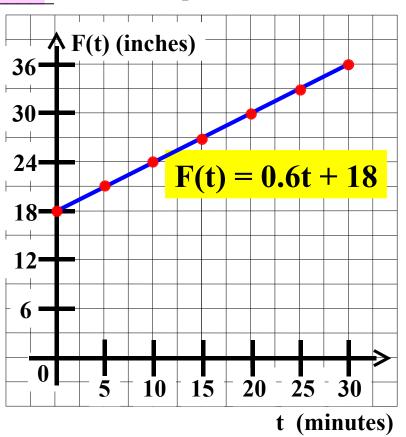


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tne tank is iuii		
t	F (t)	<u>domain</u>
	1 (6)	[0, 30]
0	18	range
5	21	
10	24	[18, 36]
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20	30	the value of t.
25	33 36	the value of the
30	36	
	ı	

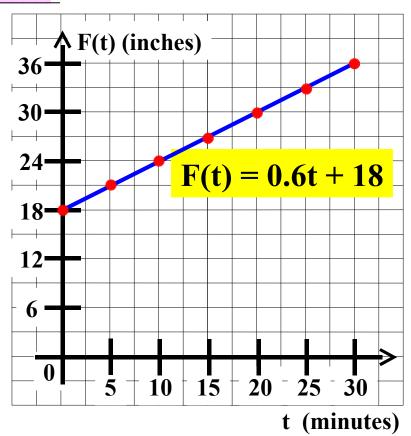


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25	33 36	
30	36	
		$F(t) = 30 \implies$

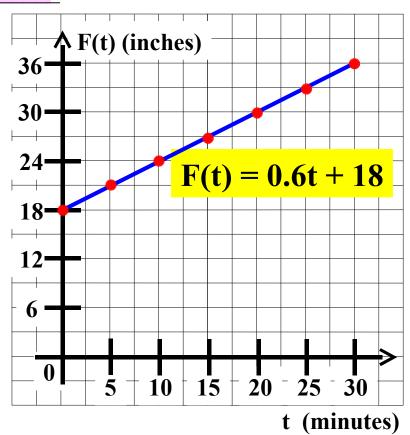


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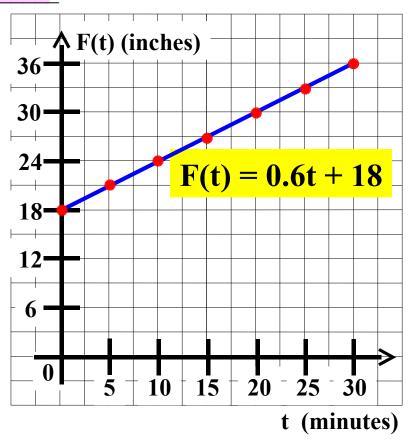
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t	F (t)	<u>domain</u>
0 5 10	18 21 24	[0, 30] range [18, 36]
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30	30	

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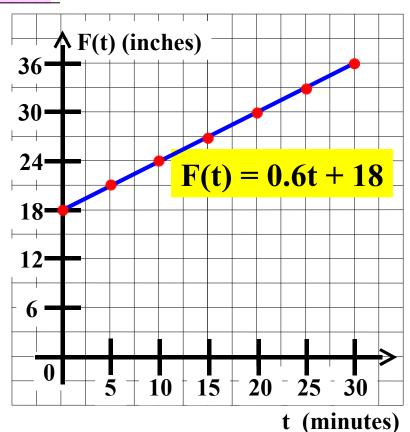


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the tank is full.				
t	F(t)		domain	
		-	[0,30]	
0	18		range	
5	21		[10, 27]	
10	24		[18, 36]	
15	27	24. If F(t	t) = 30, the	n find
20	30	the value	,	
25	33 36			
30	36			



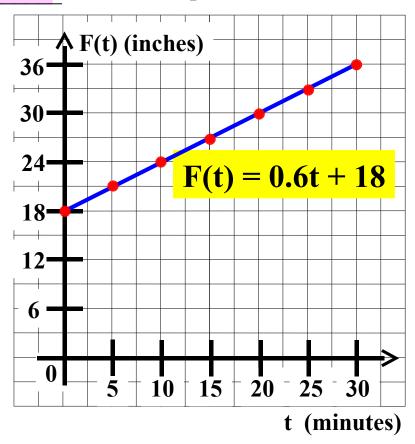
$$\mathbf{F}(\mathbf{t}) = \mathbf{30} \implies \mathbf{t} = \mathbf{20}$$

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t	F(t)	domain
0	18	[0, 30]
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	24	[18, 36]
10		[10, 30]
15	27	24. If $F(t) = 30$, then find
20	30	the value of t.
25	33	What does this value of t
30	36	represent in terms of the
		problem?
		$F(t) = 30 \implies t = 20$



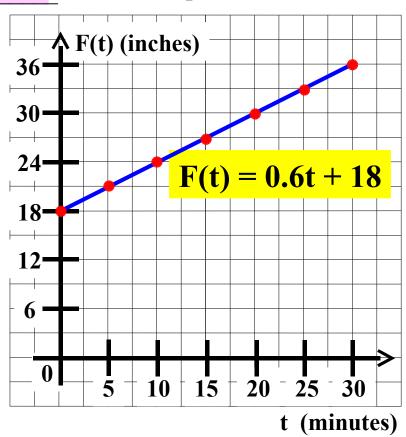
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This represents

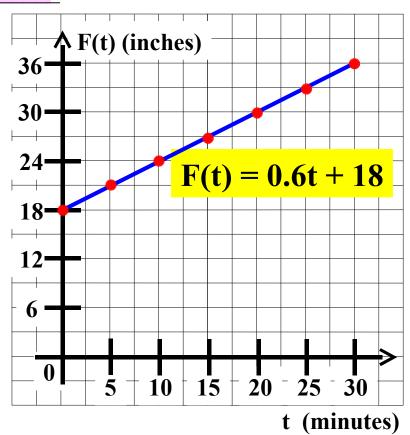
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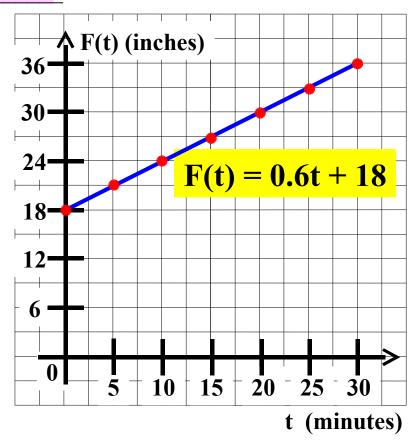
17. How long will it take to fill the tank?

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t	$\mathbf{F}(\mathbf{t})$	domain
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5	21	range
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20	30	the value of t.
25	33	What does this value of t
30	36	represent in terms of the
		problem?
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This represents the time it took for the water to be 30 inches deep.

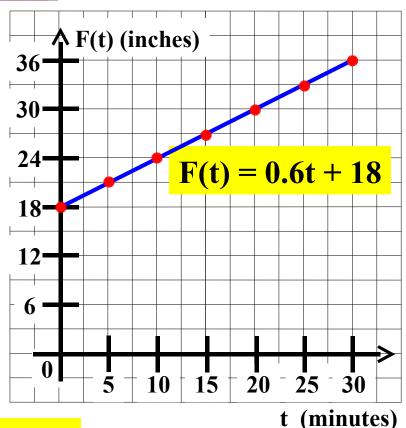
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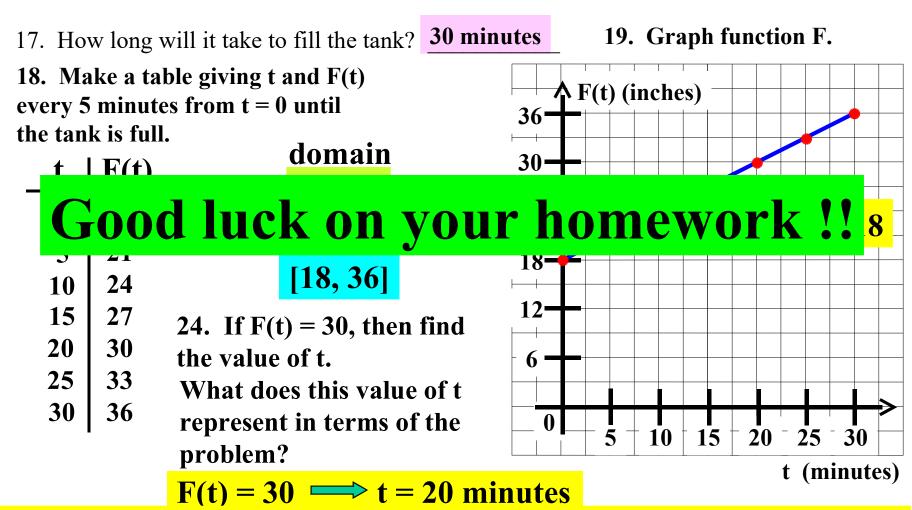
the tank is run.		domain
t	$\mathbf{F}(\mathbf{t})$	<u>domain</u>
	\ /	[0, 30]
0	18	range
5	21	
10	24	[18, 36]
15	27	24. If $F(t) = 30$, then find
20	30	the value of t.
25	33 36	What does this value of t
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	_	problem?



 $F(t) = 30 \implies t = 20 \text{ minutes}$

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