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

Algebra II   Class Worksheet #5   Unit 3

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

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$$V =$$

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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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$$\text{Time} =$$

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$$V = 72 \text{ cu. ft.}$$

$$\text{Time} = 72 \text{ cu. ft.} \div$$

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$$V = 72 \text{ cu. ft.}$$

$$\text{Time} = 72 \text{ cu. ft.} \div 4 \text{ cu. ft. per min.}$$

$$\text{Time} = 18 \text{ minutes}$$

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When t = 0, the tank is empty.

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

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6	
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When t = 0, the tank is empty.
The water is 0 inches deep.
When t = 18, the tank is full.

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0	0
3	
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.

Algebra II   Class Worksheet #5   Unit 3

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t	f(t)
0	0
3	
6	
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The water is 36 inches deep.

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The water depth increases

36 inches

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0	0
3	
6	
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**The water depth increases
36 inches in 18 minutes.**

**It increases at 2 inches
per minute.**

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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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0	0
3	6
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3	6
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9	
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6	12
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3	6
6	12
9	18
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**The water depth increases
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t	f(t)
0	0
3	6
6	12
9	18
12	24
15	
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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.

It increases 6 inches every 3 minutes.

Algebra II   Class Worksheet #5   Unit 3

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.
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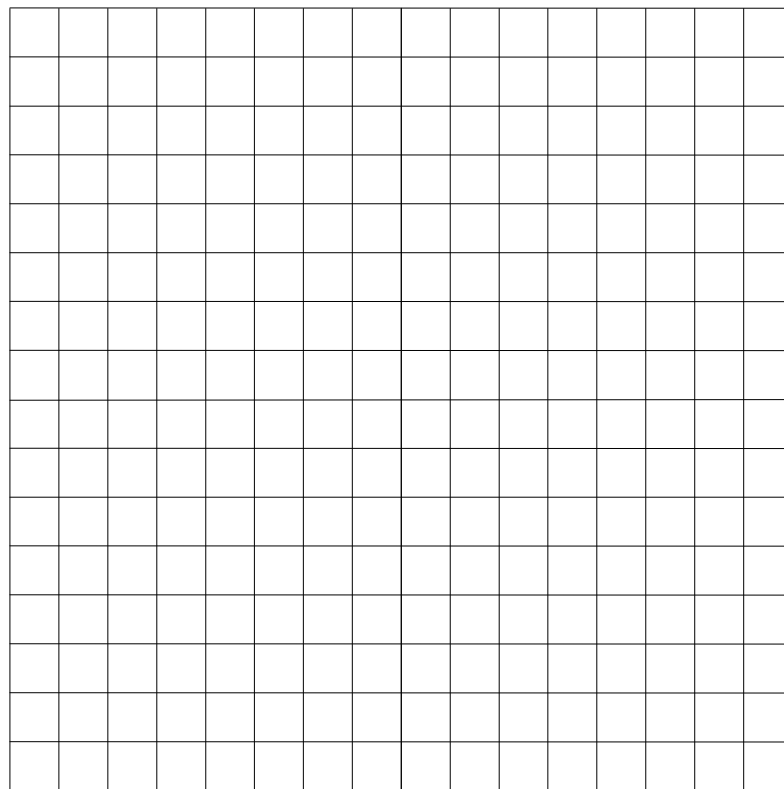Let f(t) represent the **depth of the water** in the tank (in **inches**).

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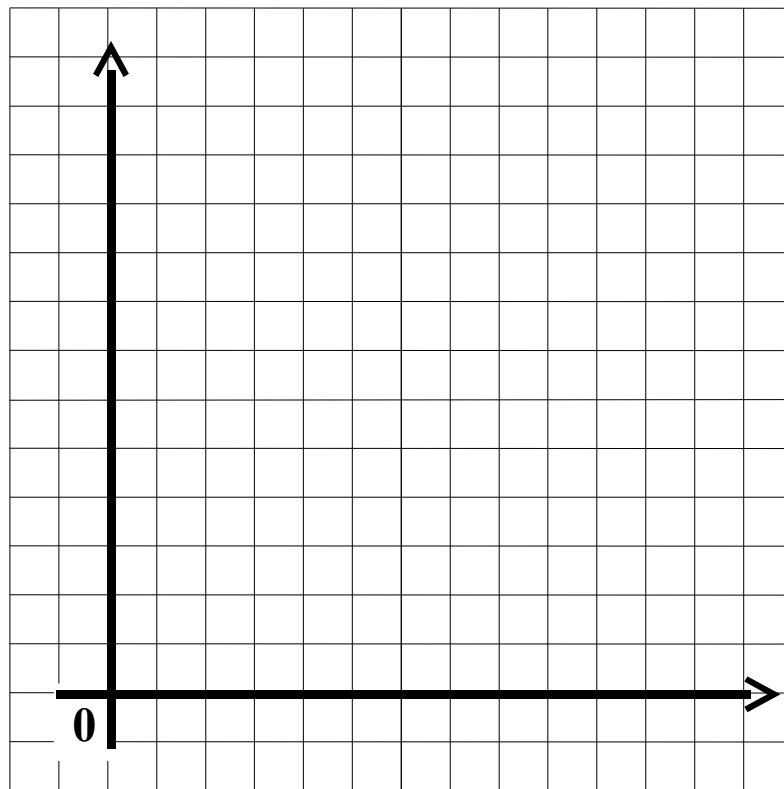Let f(t) represent the **depth of the water** in the tank (in **inches**).

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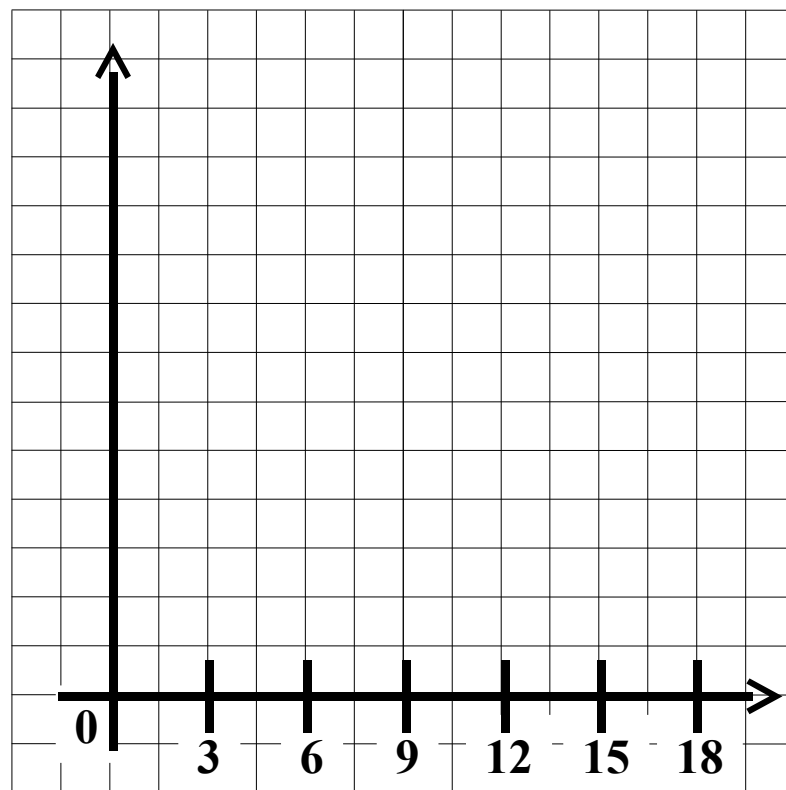Let f(t) represent the **depth of the water** in the tank (in **inches**).

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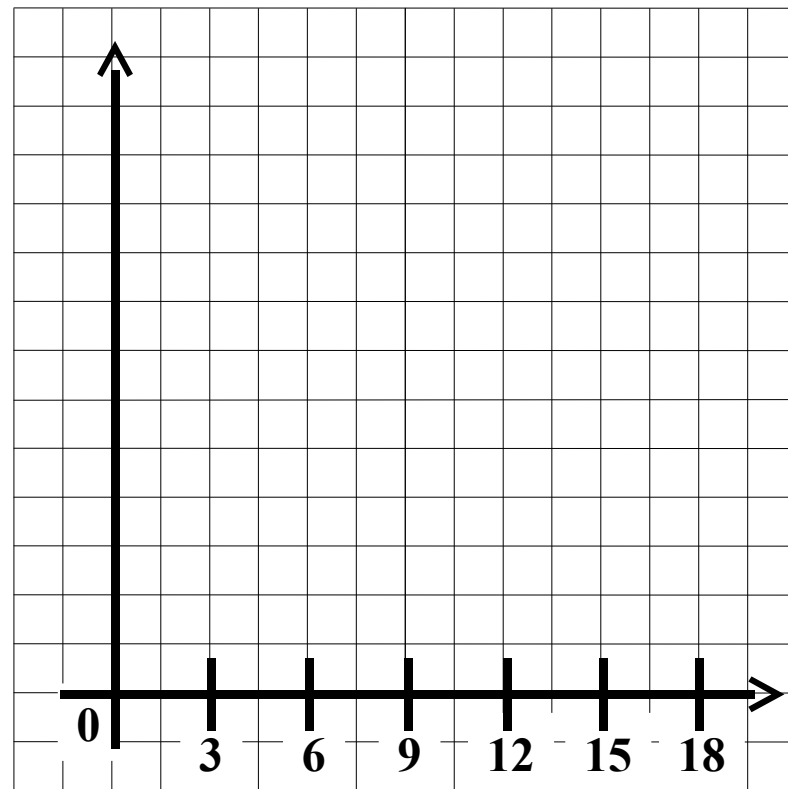Let f(t) represent the **depth of the water** in the tank (in **inches**).

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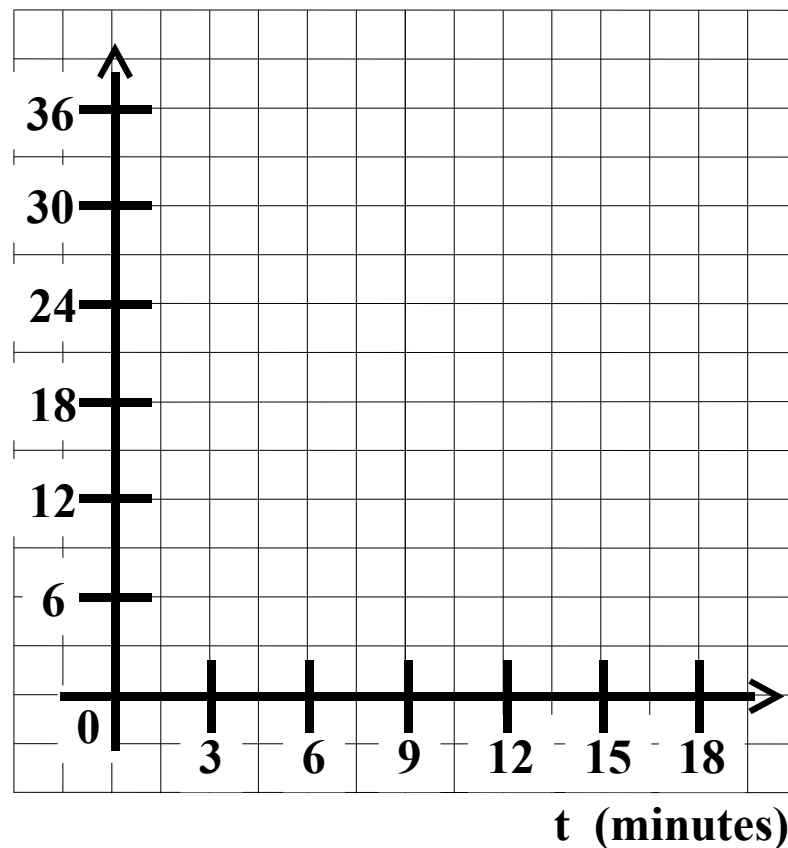Let f(t) represent the **depth of the water** in the tank (in **inches**).

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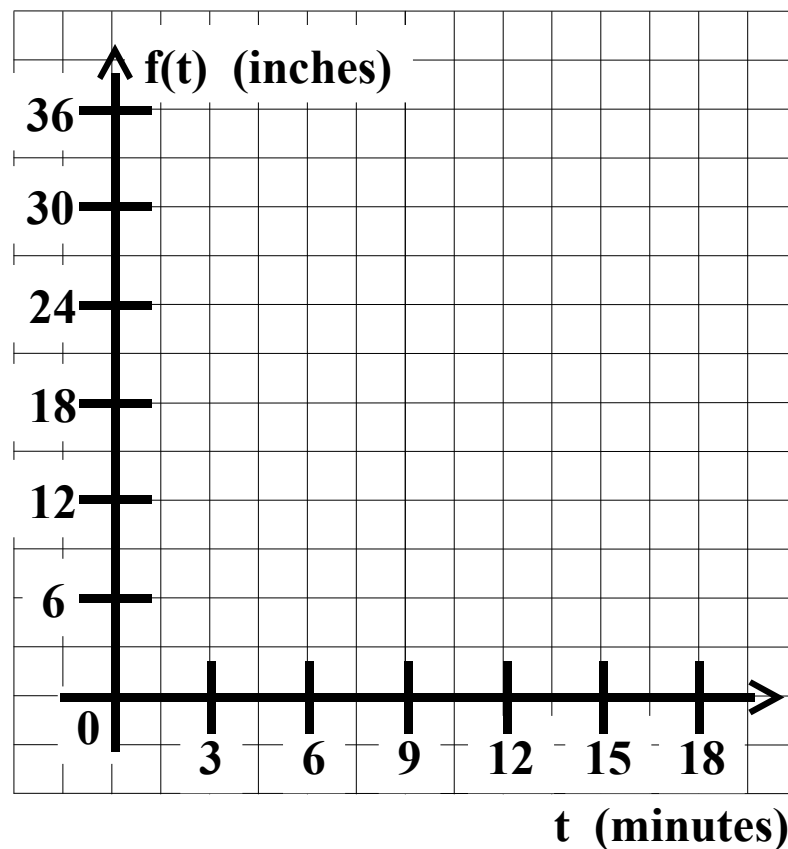Let f(t) represent the **depth of the water** in the tank (in **inches**).

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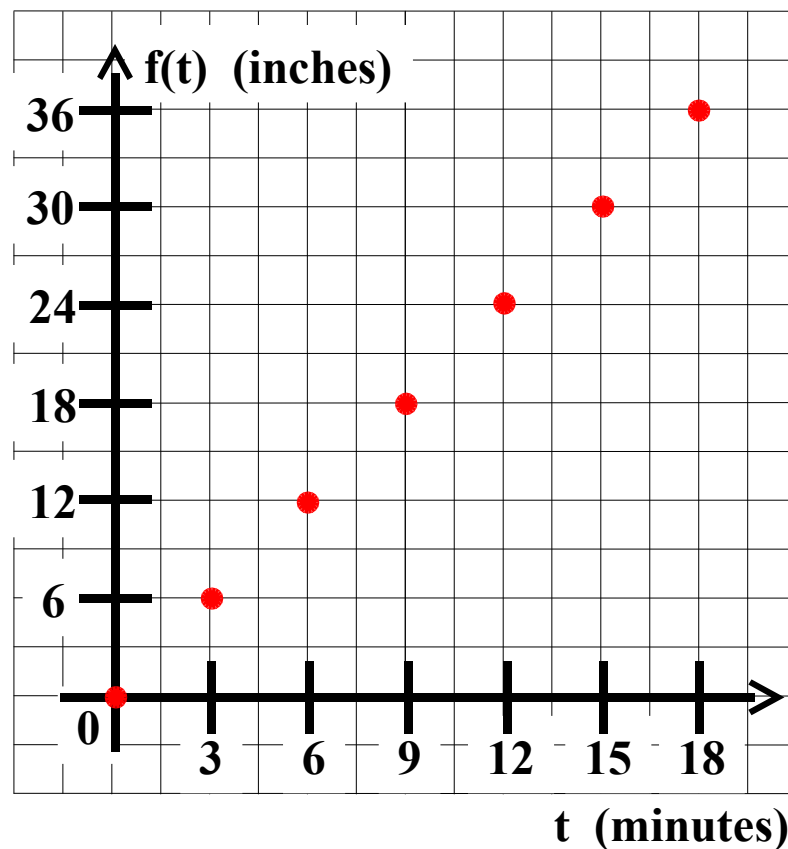Let f(t) represent the **depth of the water** in the tank (in **inches**).

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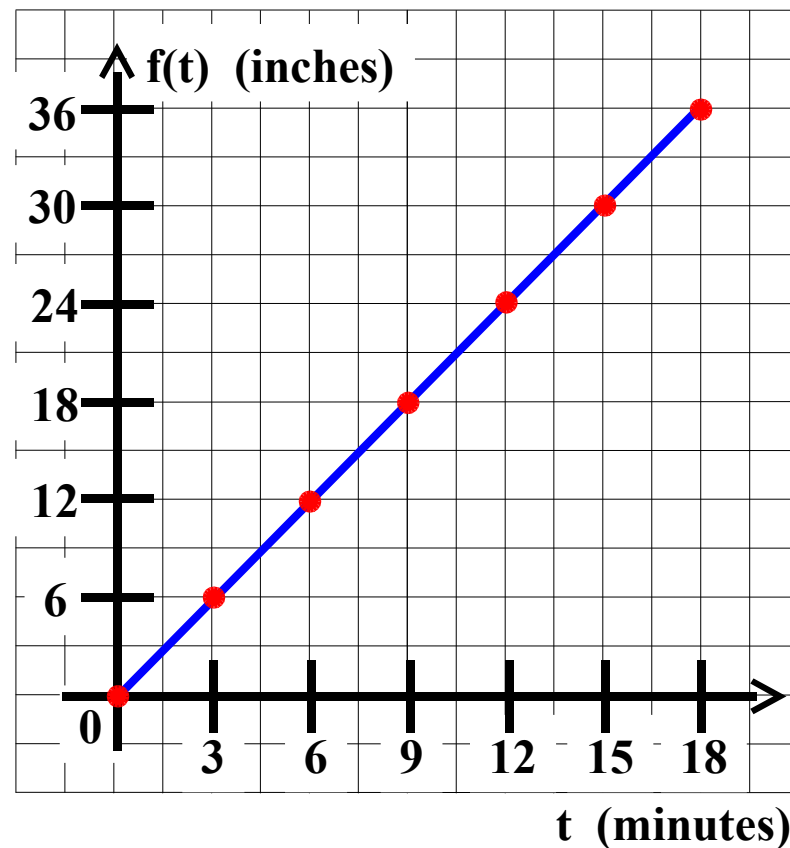Let f(t) represent the **depth of the water** in the tank (in **inches**).

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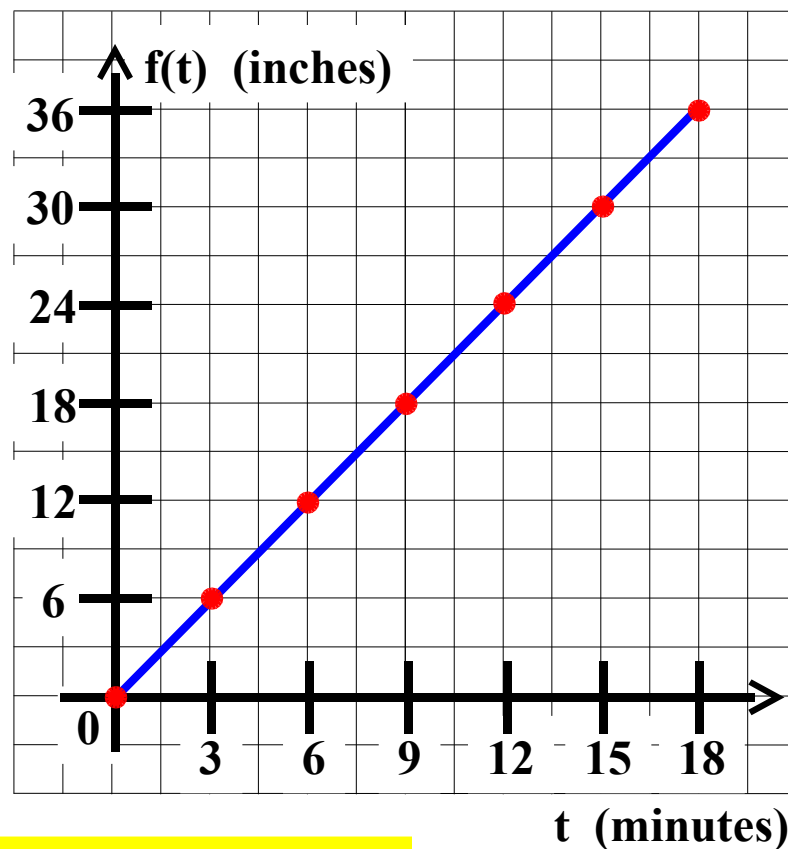Let f(t) represent the **depth of the water** in the tank (in **inches**).

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30

24

18

12

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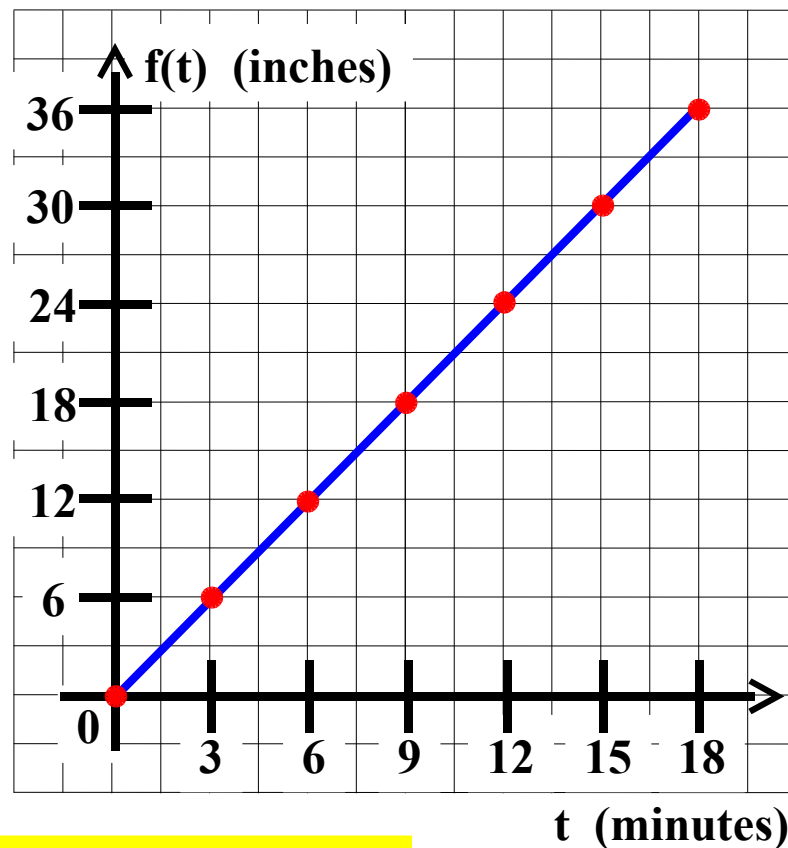Let f(t) represent the **depth of the water** in the tank (in **inches**).

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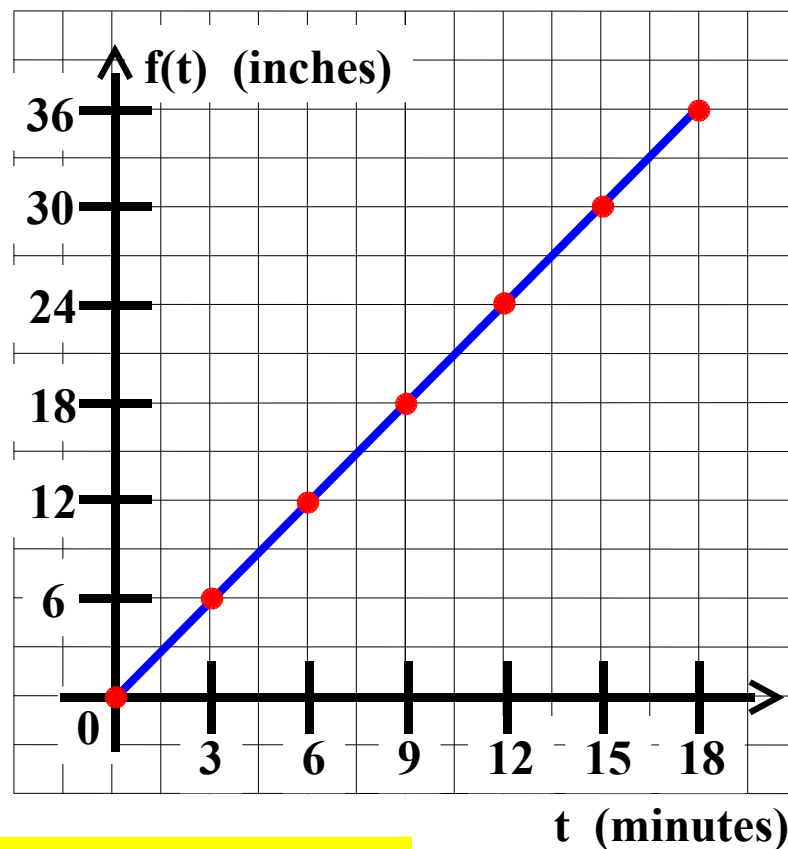Let f(t) represent the **depth of the water** in the tank (in **inches**).

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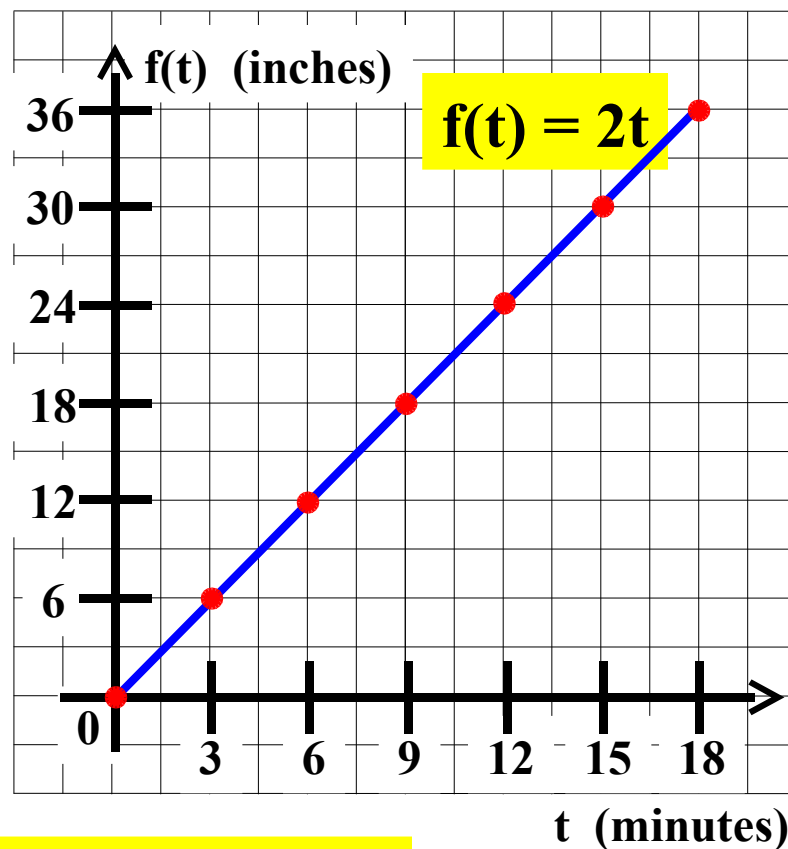Let f(t) represent the **depth of the water** in the tank (in **inches**).

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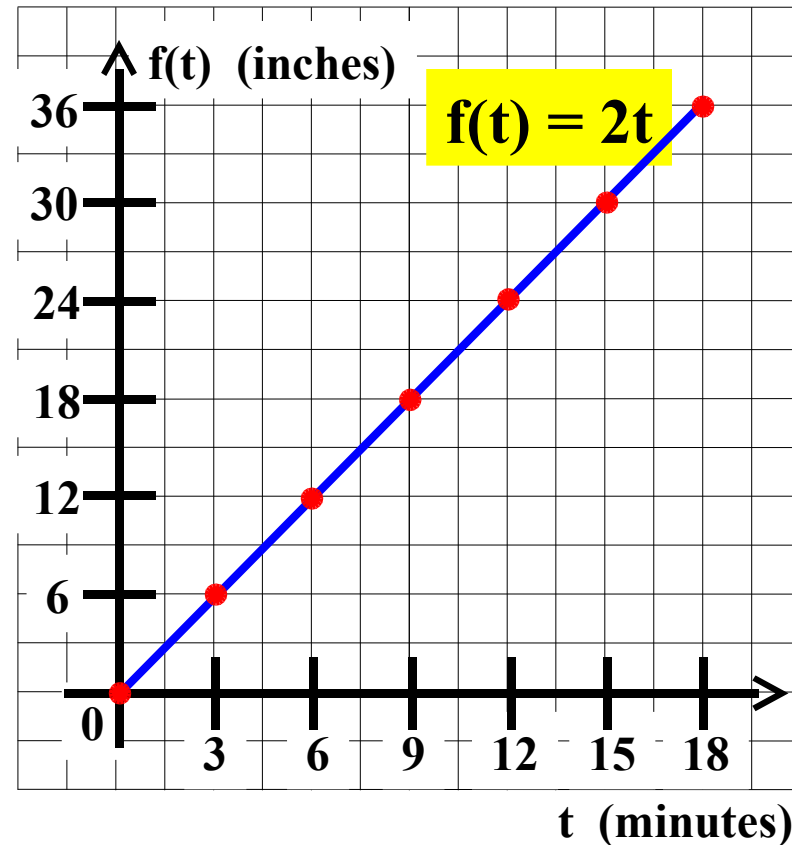Let f(t) represent the **depth of the water** in the tank (in **inches**).

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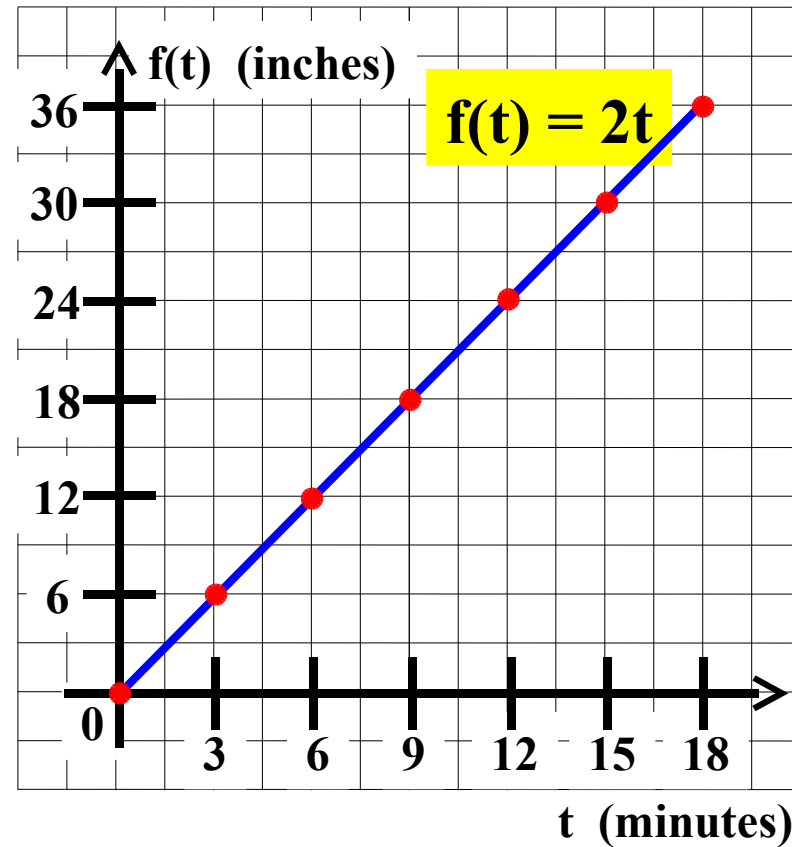Let f(t) represent the **depth of the water** in the tank (in **inches**).

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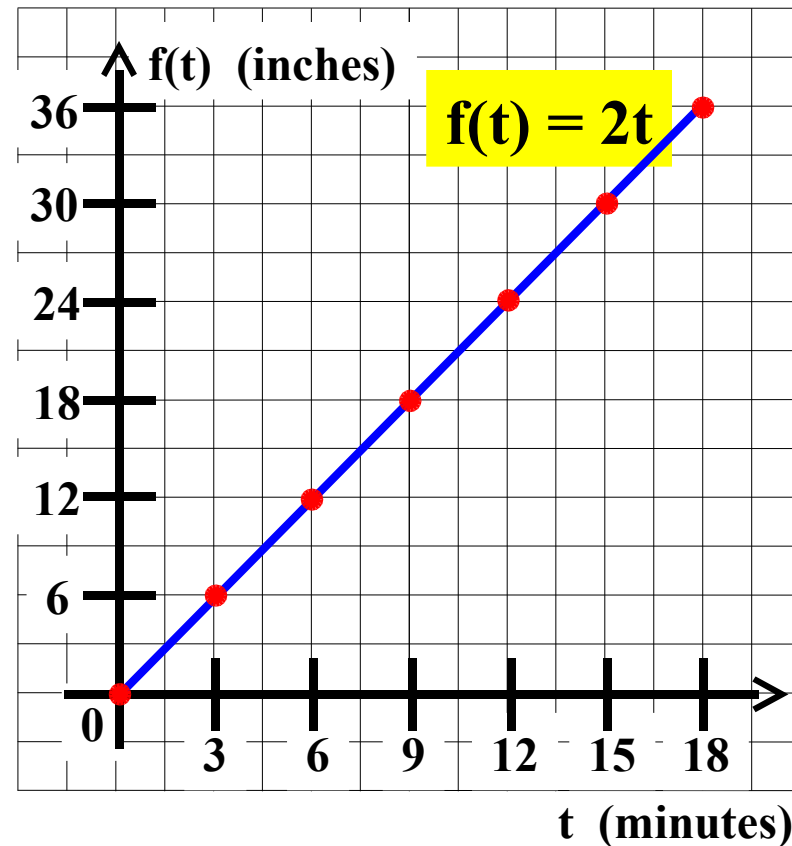Let t represent the time that water has been pumped into the tank (in **minutes**).
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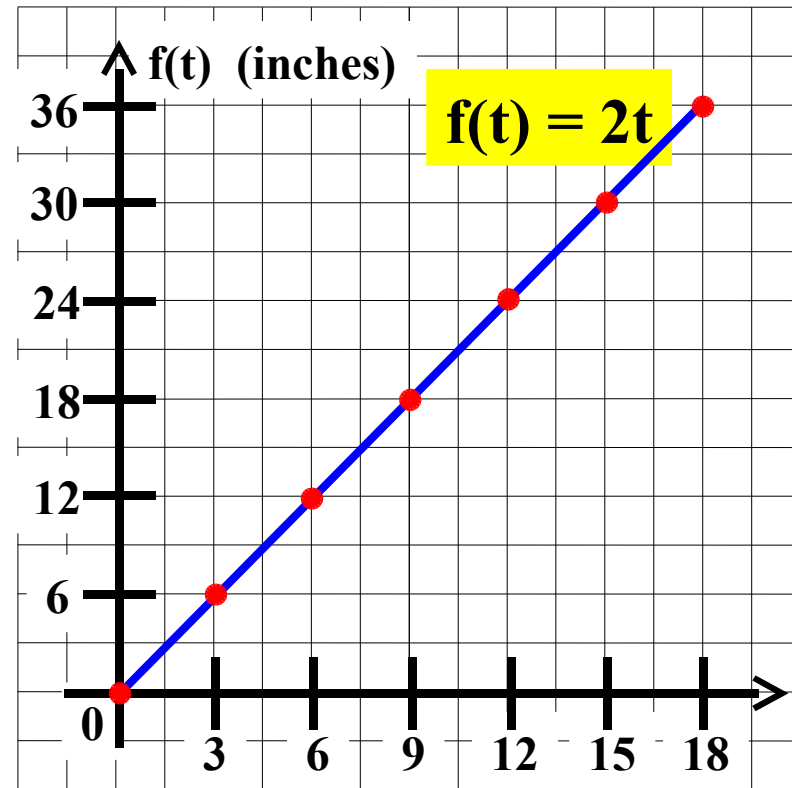Let t represent the time that water has been pumped into the tank (in **minutes**).
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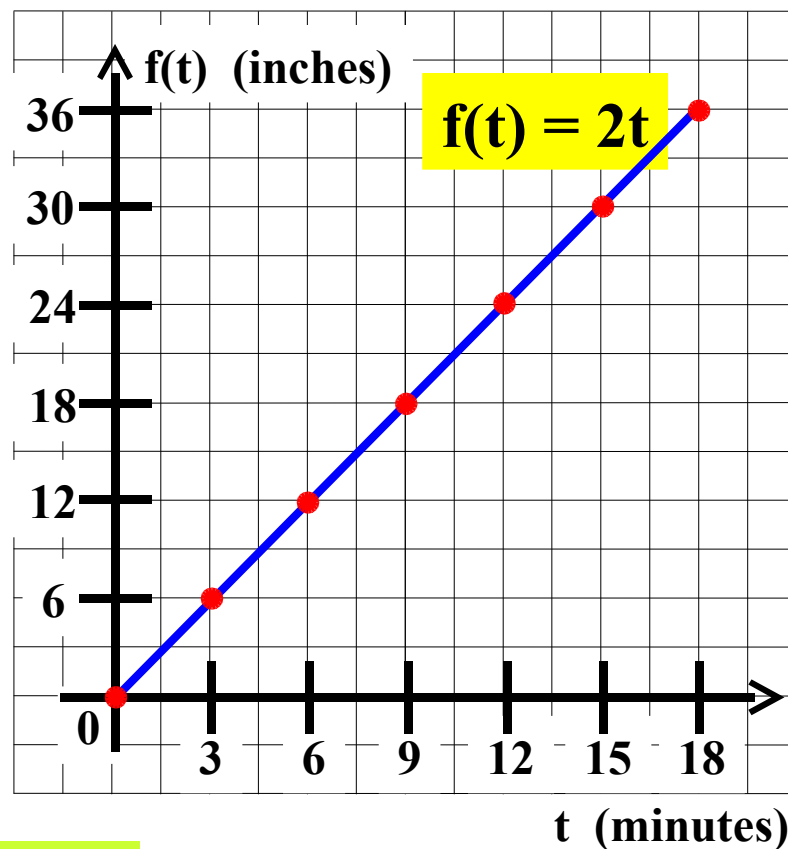Let f(t) represent the **depth of the water** in the tank (in **inches**).

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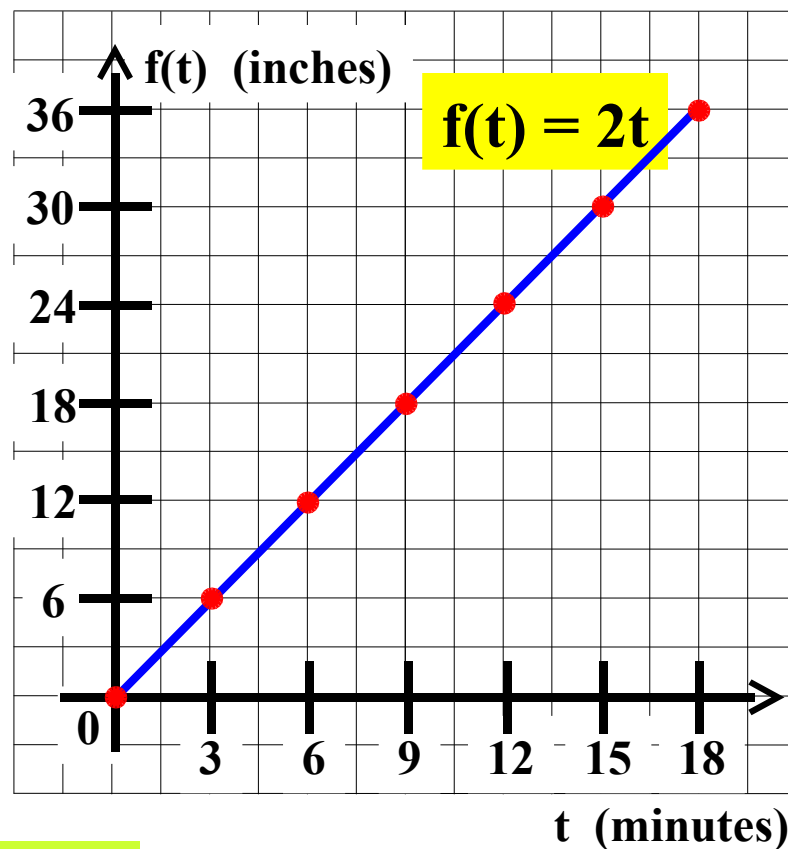Let f(t) represent the **depth of the water** in the tank (in **inches**).

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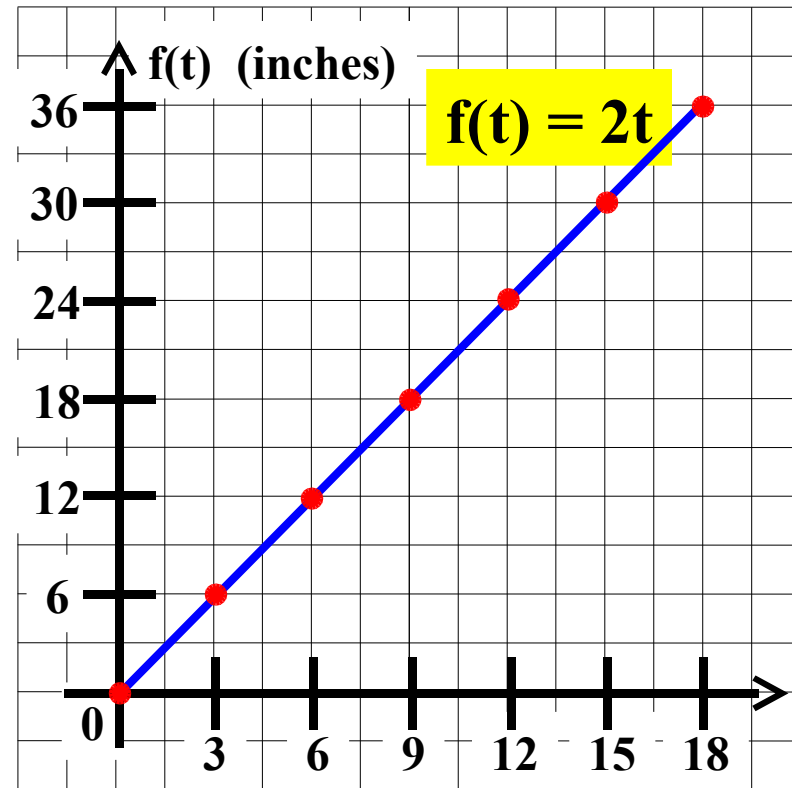Let t represent the time that water has been pumped into the tank (in **minutes**).
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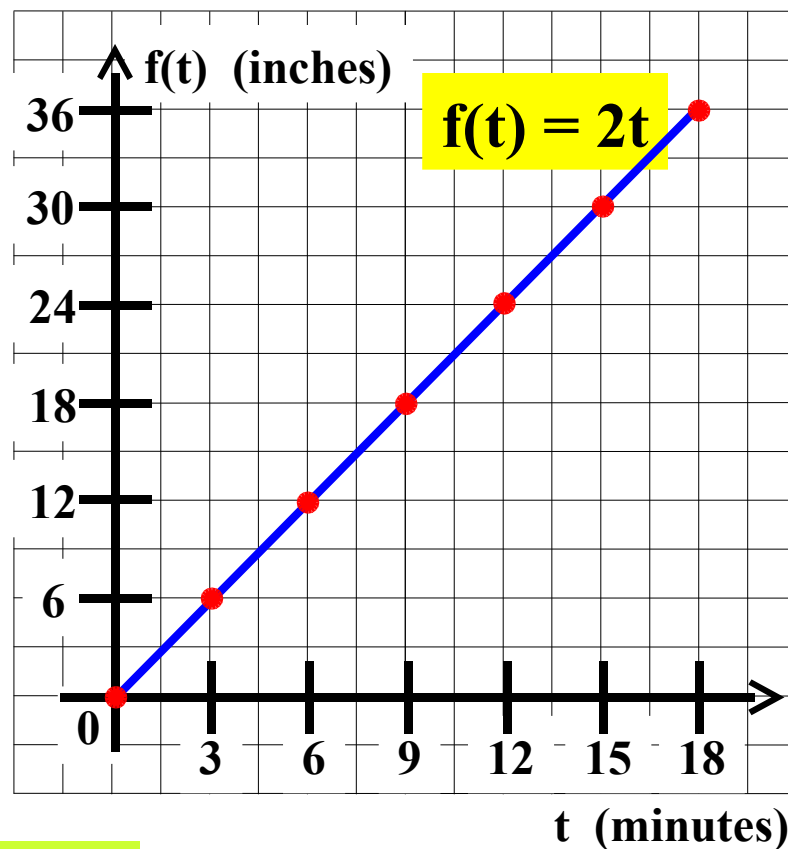
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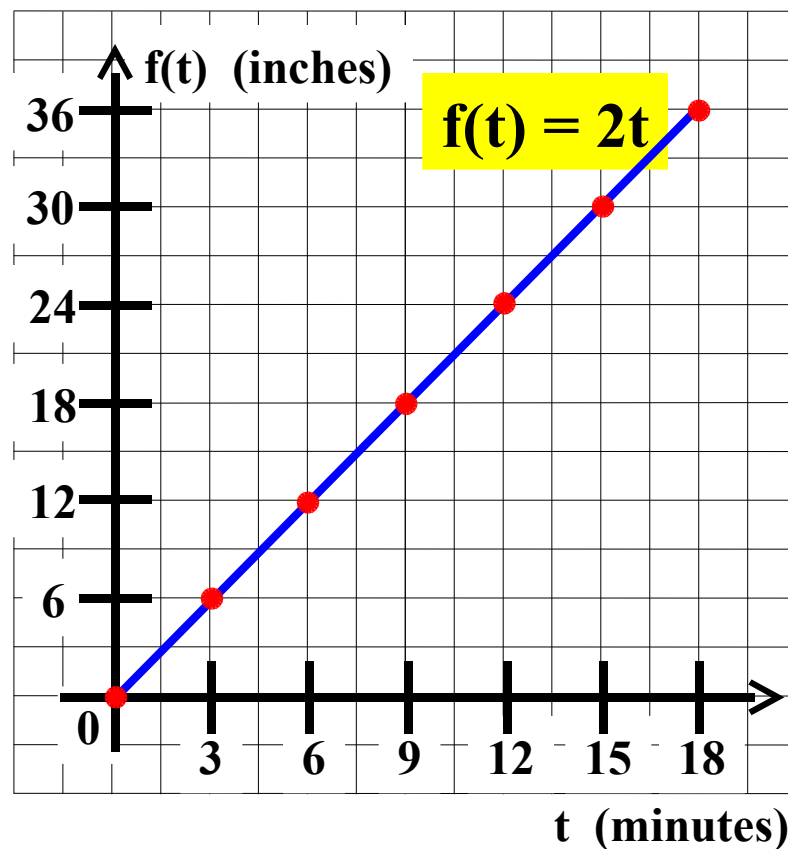
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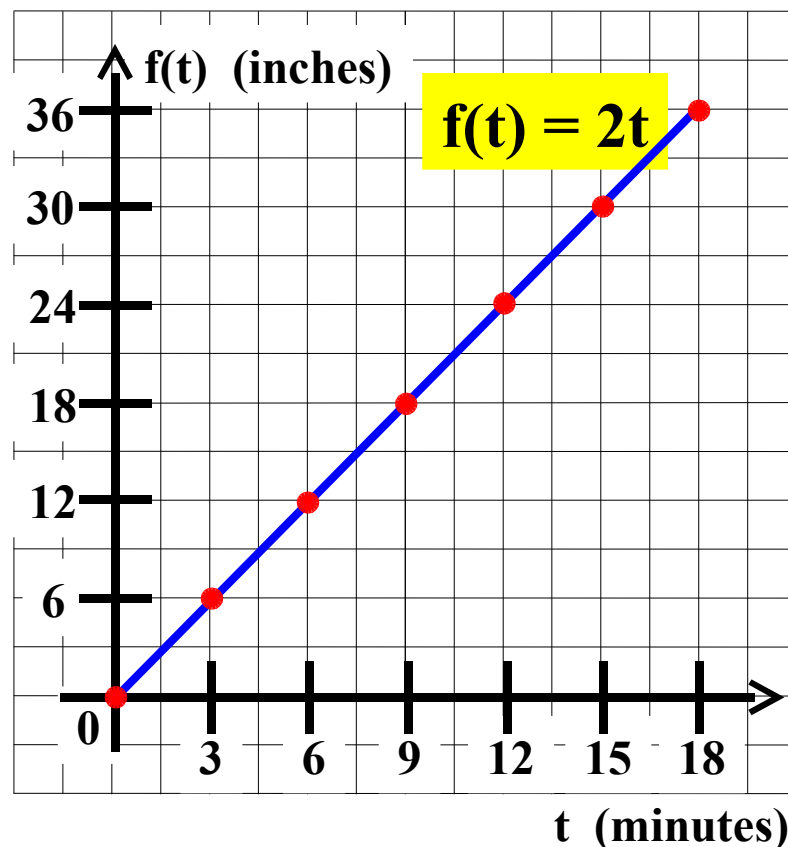
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domain

[0, 18]

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0	0
3	6
6	12
9	18
12	24
15	30
18	36

$$f(t) = 2t$$

f(t) (inches)

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

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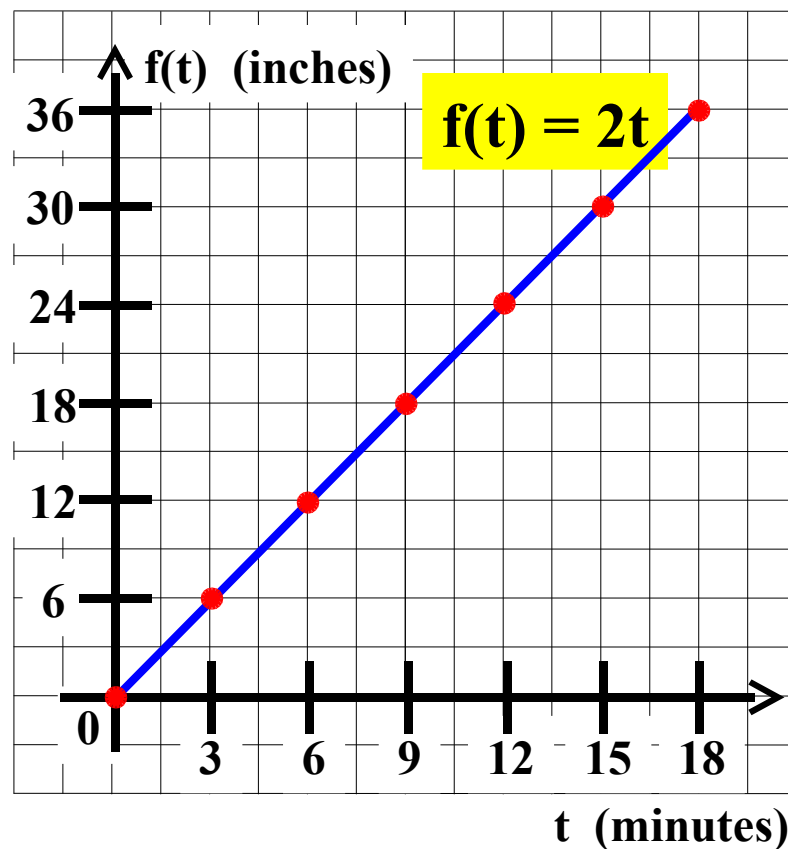
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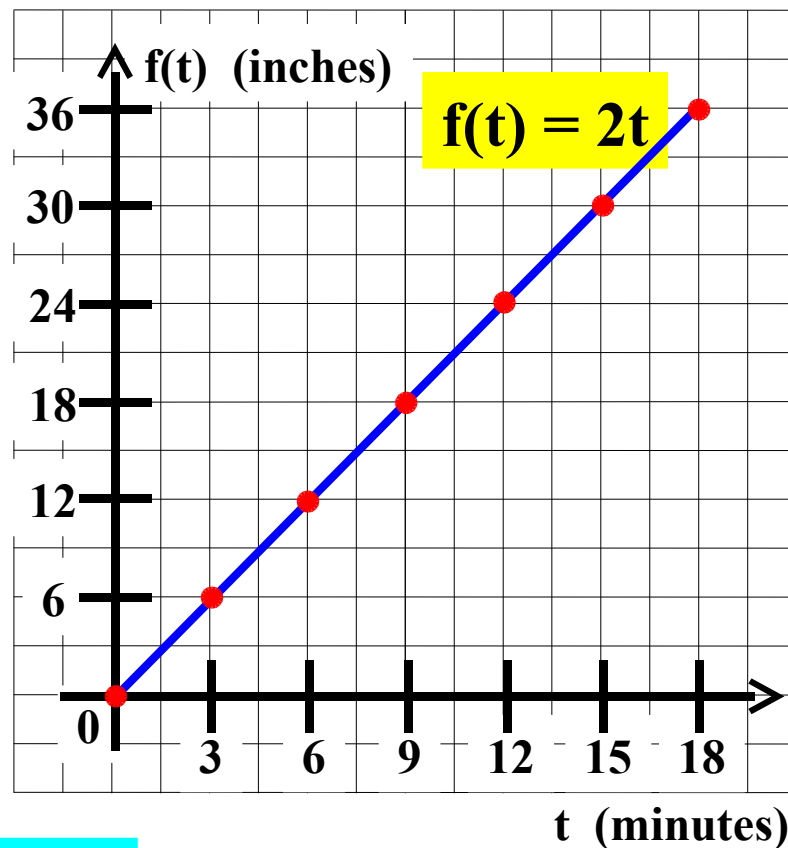
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30

24

18

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t (minutes)

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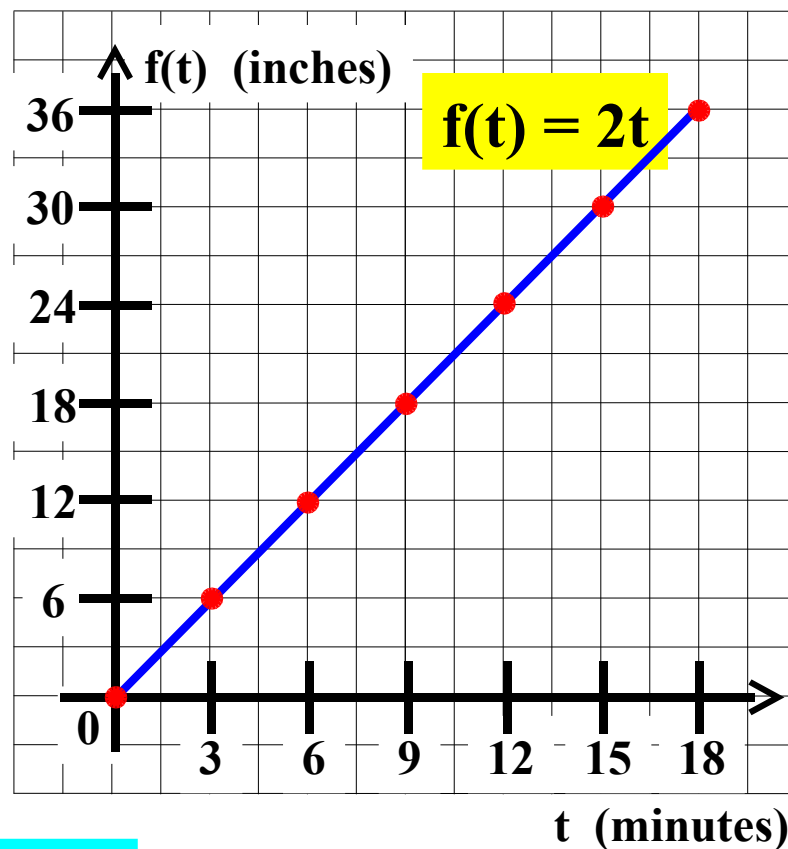
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2. **Make a table giving t and f(t) every 3 minutes from t = 0 until the tank is full.**

domain

[0, 18]

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

f(t) (inches)

f(t) = 2t

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

6. **What is the range of function f ?** _____

Algebra II   Class Worksheet #5   Unit 3

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.
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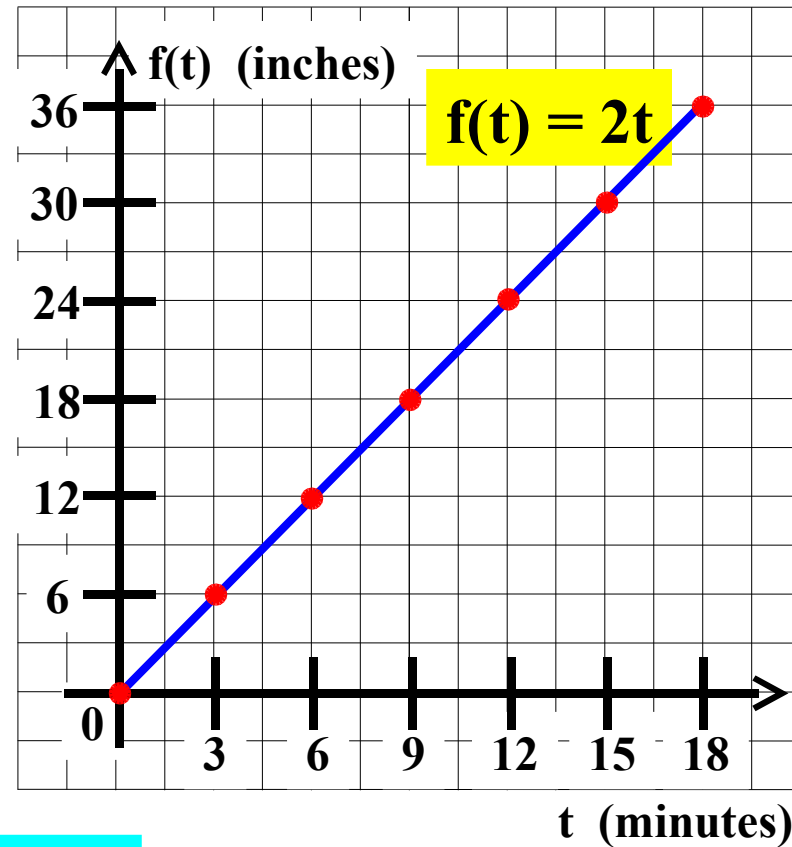
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domain

[0, 18]

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

f(t) = 2t

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30

24

18

12

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0

3   6   9   12   15   18

t (minutes)

6. **What is the range of function f ?**   [

Algebra II   Class Worksheet #5   Unit 3

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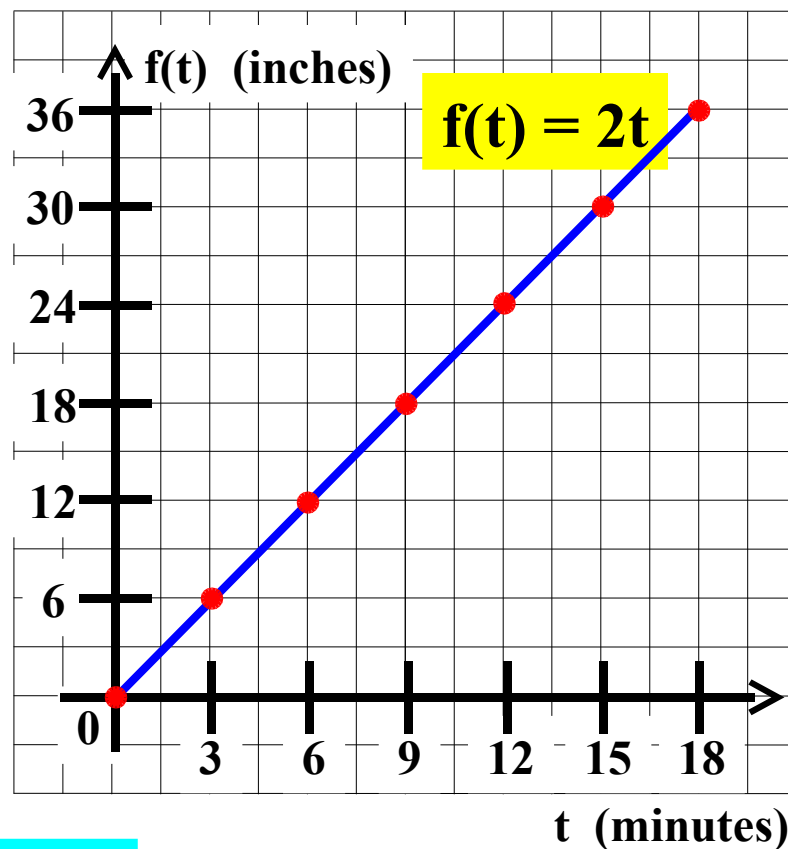
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2. **Make a table giving t and f(t)
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domain

[0, 18]

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

f(t) (inches)

$f(t) = 2t$

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

6. **What is the range of function f ?**   **[0,**

Algebra II   Class Worksheet #5   Unit 3

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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)
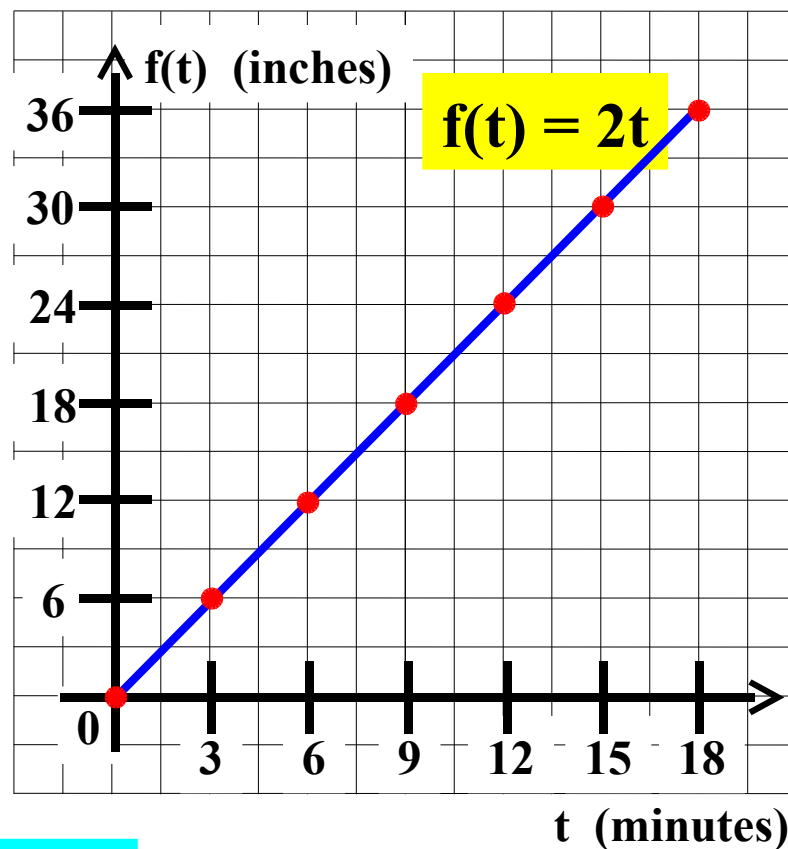every 3 minutes from t = 0 until
the tank is full.**

domain

[0, 18]

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

f(t) (inches)

f(t) = 2t

t (minutes)

6. **What is the range of function f ?**   **[0, 36**

Algebra II   Class Worksheet #5   Unit 3

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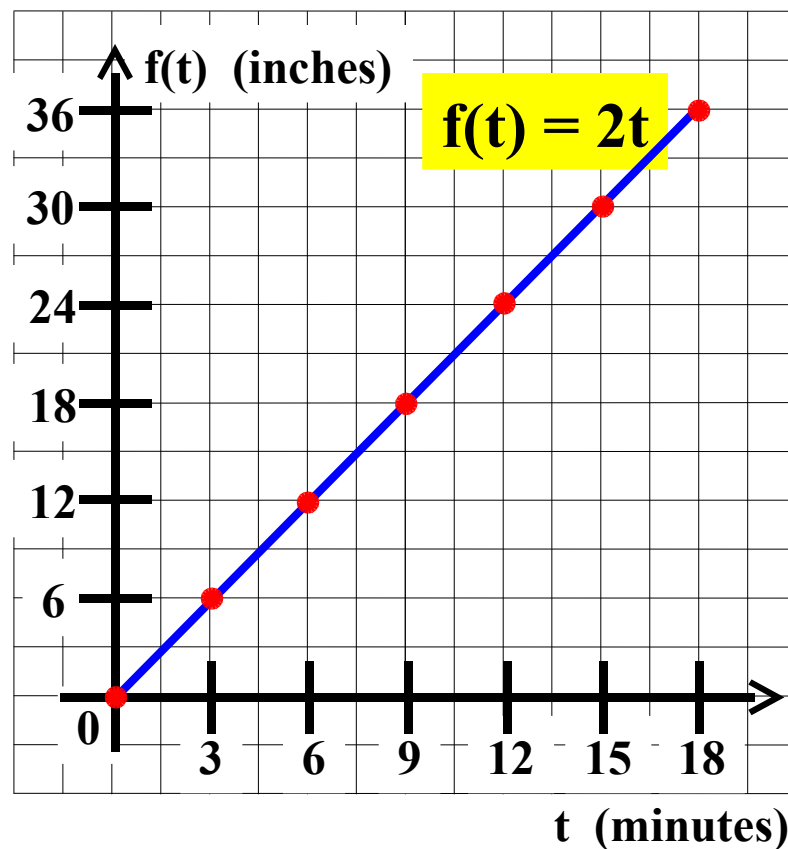every 3 minutes from t = 0 until
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[0, 18]

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0	0
3	6
6	12
9	18
12	24
15	30
18	36

f(t) (inches)

f(t) = 2t

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

6. **What is the range of function f ?**   **[0, 36]**

Algebra II   Class Worksheet #5   Unit 3

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.
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0	0
3	6
6	12
9	18
12	24
15	30
18	36

domain
[0, 18]

range
[0, 36]

$f(t) = 2t$

f(t) (inches)

t (minutes)

6. **What is the range of function f ?**   **[0, 36]**

Algebra II   Class Worksheet #5   Unit 3

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty
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18	36

domain

[0, 18]

range

[0, 36]

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f(t) (inches)

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty
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domain

[0, 18]

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[0, 36]

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

7. **Evaluate f(4).**

f(t) (inches)

$f(t) = 2t$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.
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f(t) (inches)

t (minutes)

Algebra II Class Worksheet #5 Unit 3

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Algebra II   Class Worksheet #5   Unit 3

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0	0
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18	36

domain
[0, 18]

range
[0, 36]

7. **Evaluate f(4).**
$$f(t) = 2t$$
$$f(4) = 2(4)$$

3. **Graph function f.**

$f(t) = 2t$

Algebra II   Class Worksheet #5   Unit 3

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$$f(t) = 2t$$

$$f(4) = 2(4)$$

$$f(4) =$$

3. **Graph function f.**

f(t) (inches)

$f(t) = 2t$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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domain

[0, 18]

range

[0, 36]

7. **Evaluate f(4).**

$$f(t) = 2t$$

$$f(4) = 2(4)$$

$$f(4) = 8$$

f(t) (inches)

$$f(t) = 2t$$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.
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domain

[0, 18]

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[0, 36]

7. **Evaluate f(4).**

$f(4) = 8$

f(t) (inches)

$f(t) = 2t$

t (minutes)

Algebra II Class Worksheet #5 Unit 3

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3	6
6	12
9	18
12	24
15	30
18	36

domain
[0, 18]

range
[0, 36]

7. **Evaluate f(4).**

What does f(4) represent in terms of the problem?

$f(4) = 8$

$f(t) = 2t$

f(t) (inches)

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty
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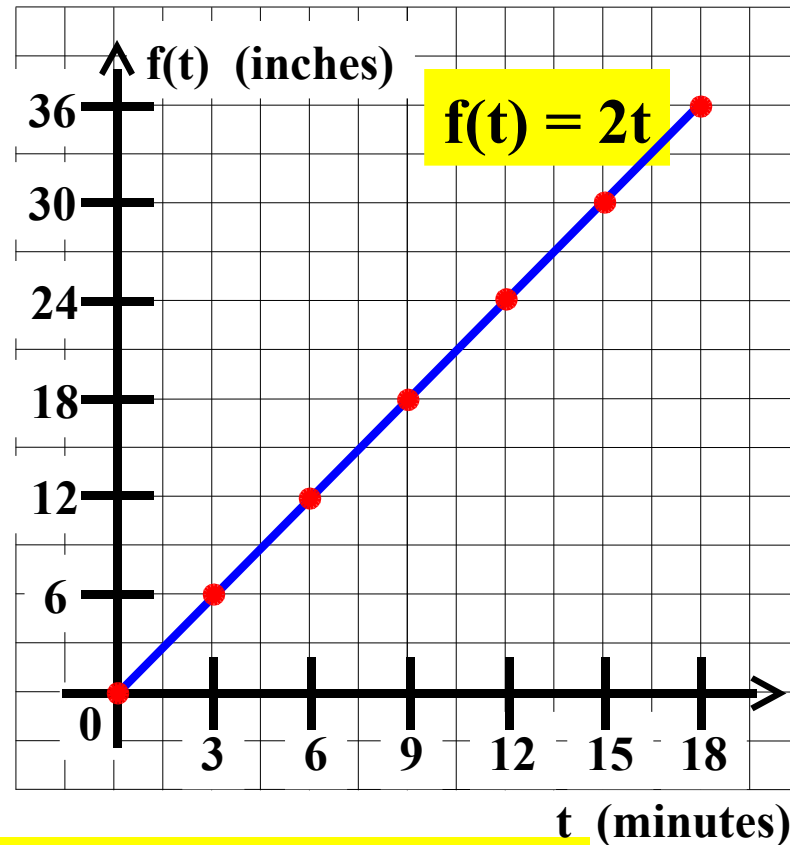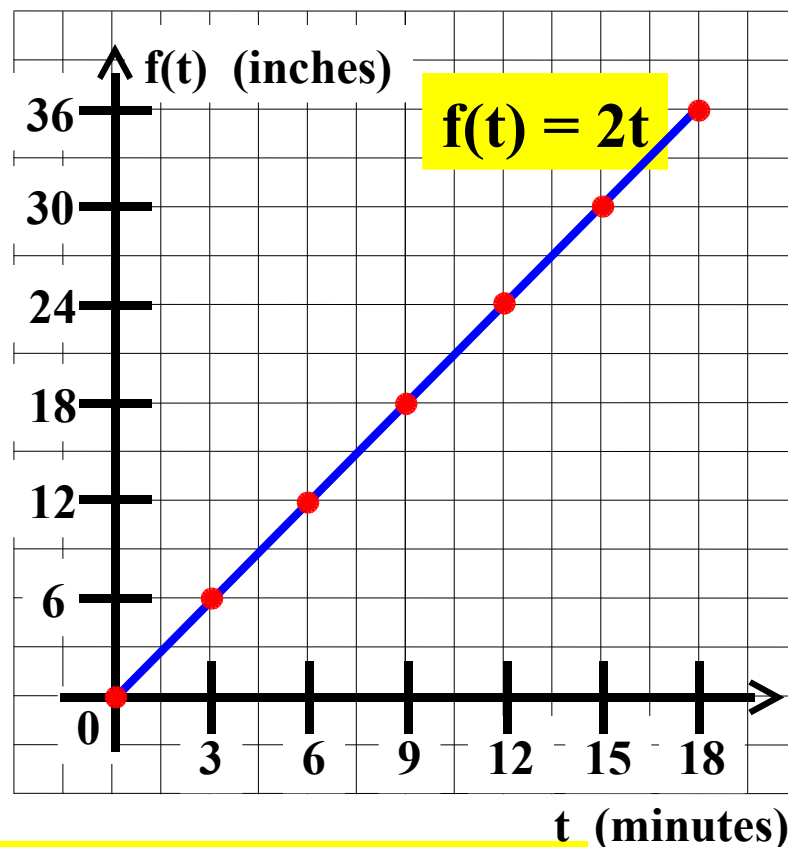| t	f(t)
0	0
3	6
6	12
9	18
12	24
15	30
18	36

7. Evaluate f(4).

**What does f(4) represent
in terms of the problem?**

$f(4) = 8$

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

f(t) (inches)

$f(t) = 2t$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.**

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6	12
9	18
12	24
15	30
18	36

domain
[0, 18]

range
[0, 36]

7. **Evaluate f(4).**

What does f(4) represent in terms of the problem?

$$f(4) = 8$$

3. **Graph function f.**

f(t) (inches)

f(t) = 2t

t (minutes)

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

Algebra II   Class Worksheet #5   Unit 3

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.
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[0, 18]

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3	6
6	12
9	18
12	24
15	30
18	36

range

[0, 36]

7. **Evaluate f(4).**

**What does f(4) represent
in terms of the problem?**

$f(4) = 8$

3. **Graph function f.**

$f(t) = 2t$

f(t) (inches)

t (minutes)

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

Algebra II   Class Worksheet #5   Unit 3

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty
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every 3 minutes from t = 0 until
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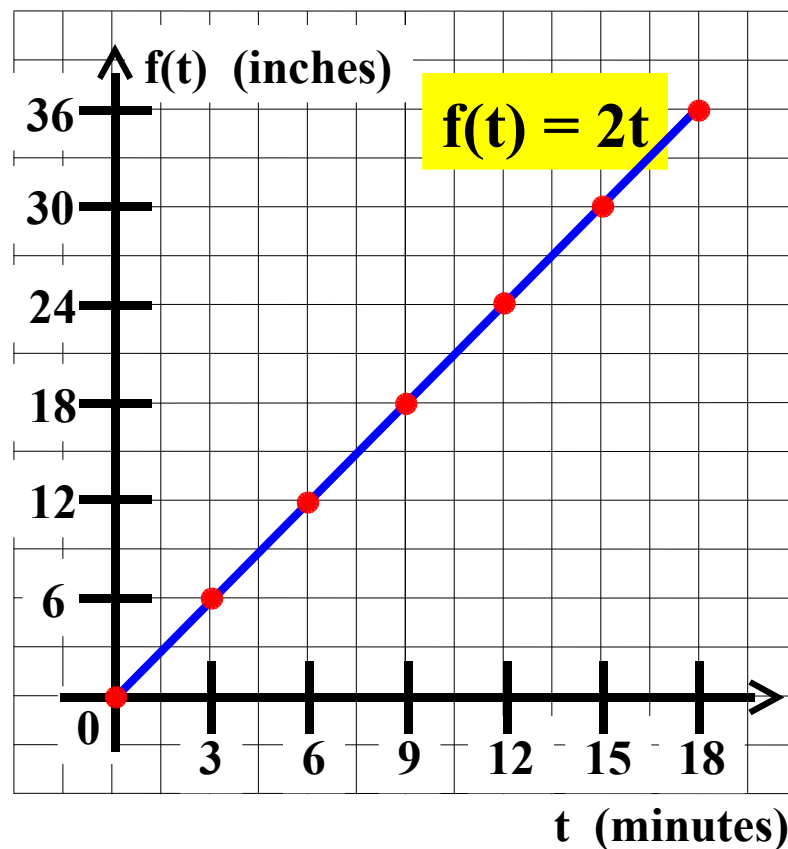| t	f(t)
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3	6
6	12
9	18
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15	30
18	36

domain

[0, 18]

range

[0, 36]

7. Evaluate f(4).

**What does f(4) represent
in terms of the problem?**

f(4) = 8 inches

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

3. **Graph function f.**

$$f(t) = 2t$$

f(t) (inches)

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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

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3	6
6	12
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domain
[0, 18]

range
[0, 36]

f(t) (inches)

f(t) = 2t

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty
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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.**

domain

[0, 18]

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

range

[0, 36]

**8. If f(t) = 30, then find
the value of t.**

f(t) (inches)

$f(t) = 2t$

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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domain

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

range

[0, 36]

8. **If f(t) = 30, then find**
    the value of t.

f(t) = 30

f(t) (inches)

f(t) = 2t

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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9	18
12	24
15	30
18	36

domain

[0, 18]

range

[0, 36]

8. **If f(t) = 30, then find**
    the value of t.

f(t) = 30

2t = 30

f(t) (inches)

f(t) = 2t

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

A rectangular water tank is 6 feet long, 4 feet wide, and 3 feet deep. The tank is empty
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every 3 minutes from t = 0 until
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domain

[0, 18]

range

[0, 36]

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

8. **If f(t) = 30, then find
the value of t.**

f(t) = 30 ⟹ t =

2t = 30

3. **Graph function f.**

f(t) (inches)

$f(t) = 2t$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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the value of t.**

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

$2t = 30$

f(t) (inches)

$f(t) = 2t$

36

30

24

18

12

6

0

3   6   9   12   15   18

t (minutes)

Algebra II Class Worksheet #5 Unit 3

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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.**

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

domain
[0, 18]

range
[0, 36]

8. **If f(t) = 30, then find
the value of t.**

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

f(t) (inches)

$f(t) = 2t$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.
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[0, 36]

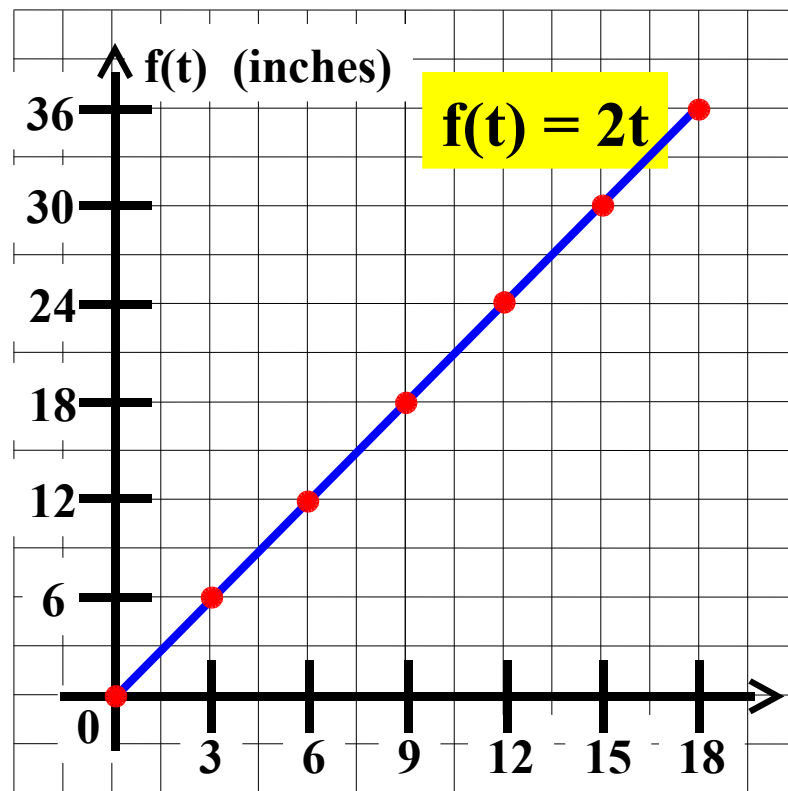| t	f(t)
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f(t) (inches)

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36
30
24
18
12
6
0

3   6   9   12   15   18

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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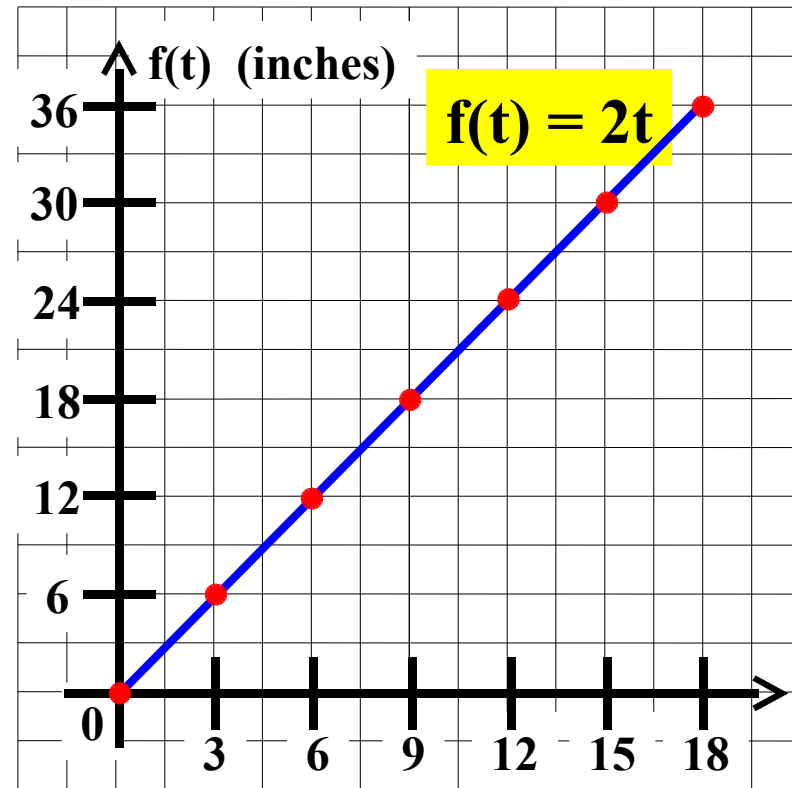| t	f(t)
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24

18

12

6

0

3   6   9   12   15   18

t (minutes)

This represents

Algebra II   Class Worksheet #5   Unit 3

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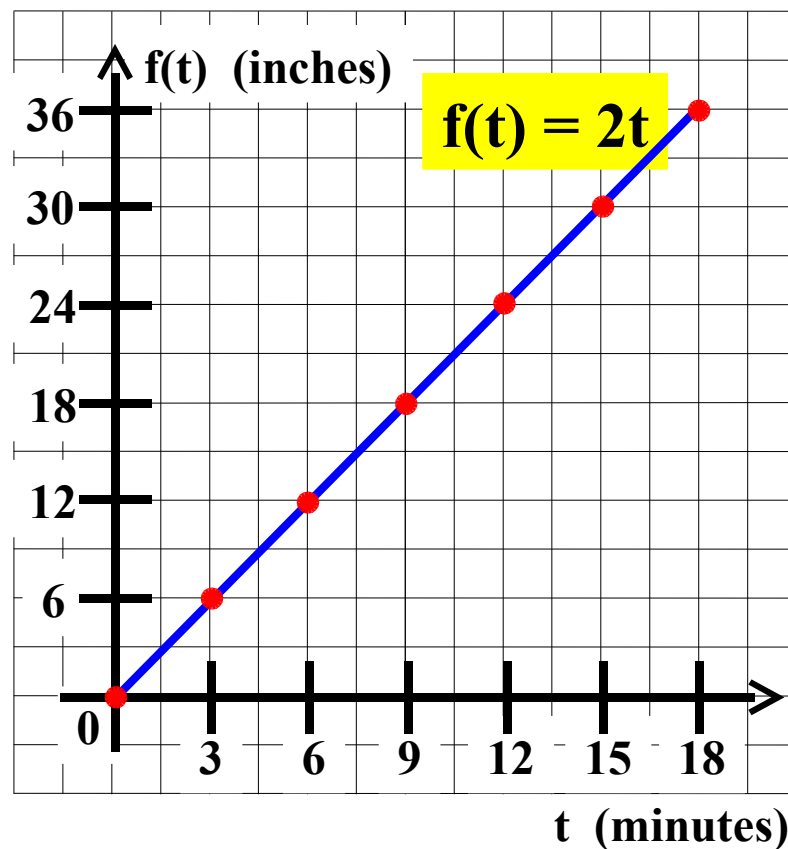| t	f(t)
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This represents _the time_

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t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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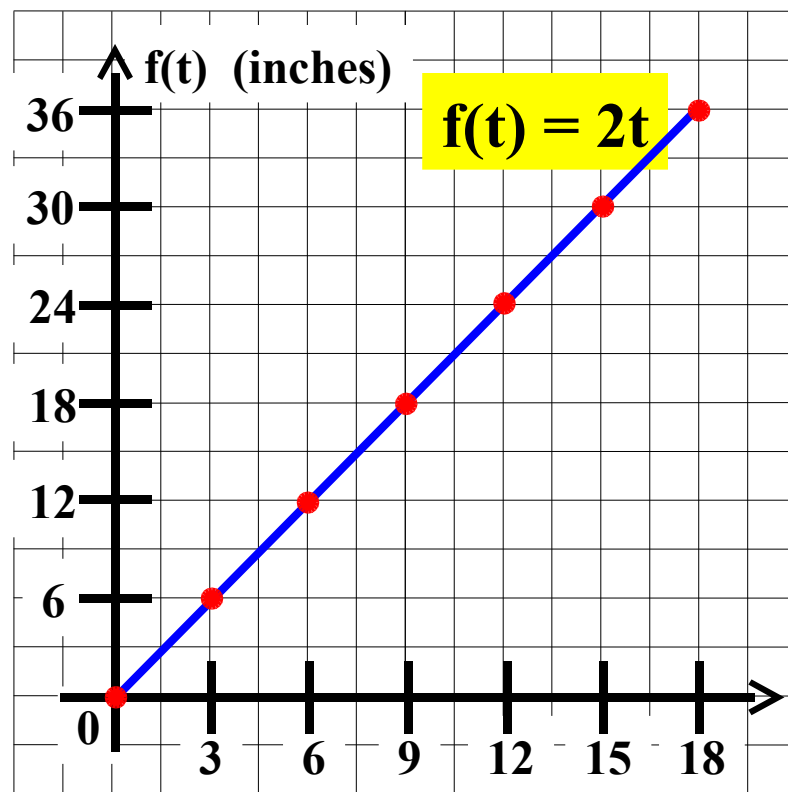| t	f(t)
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This represents <u>the time</u> it took for the water

Algebra II   Class Worksheet #5   Unit 3

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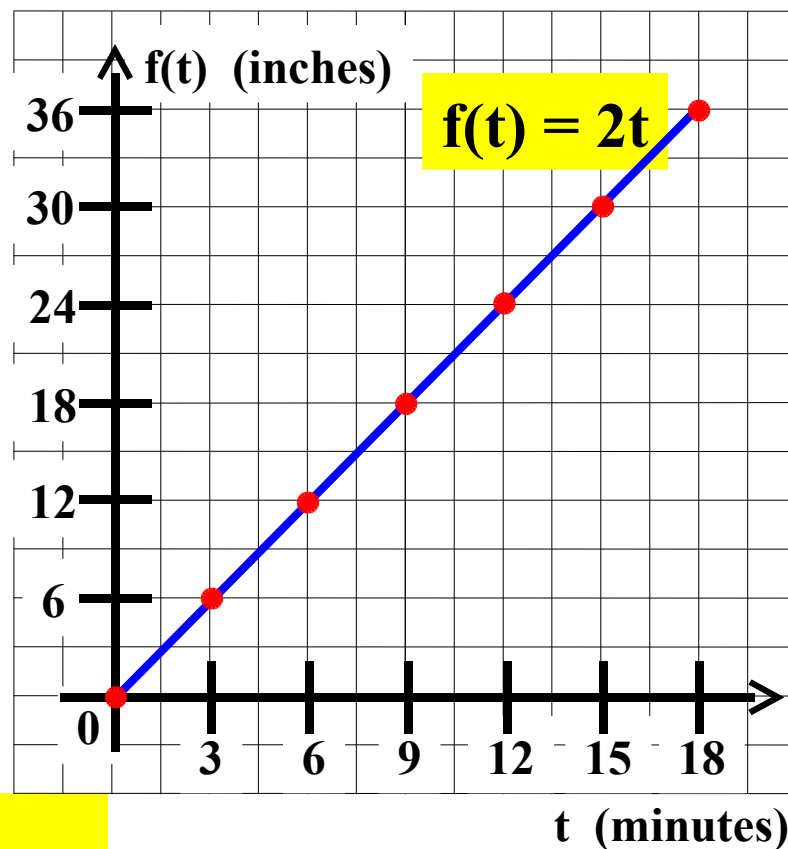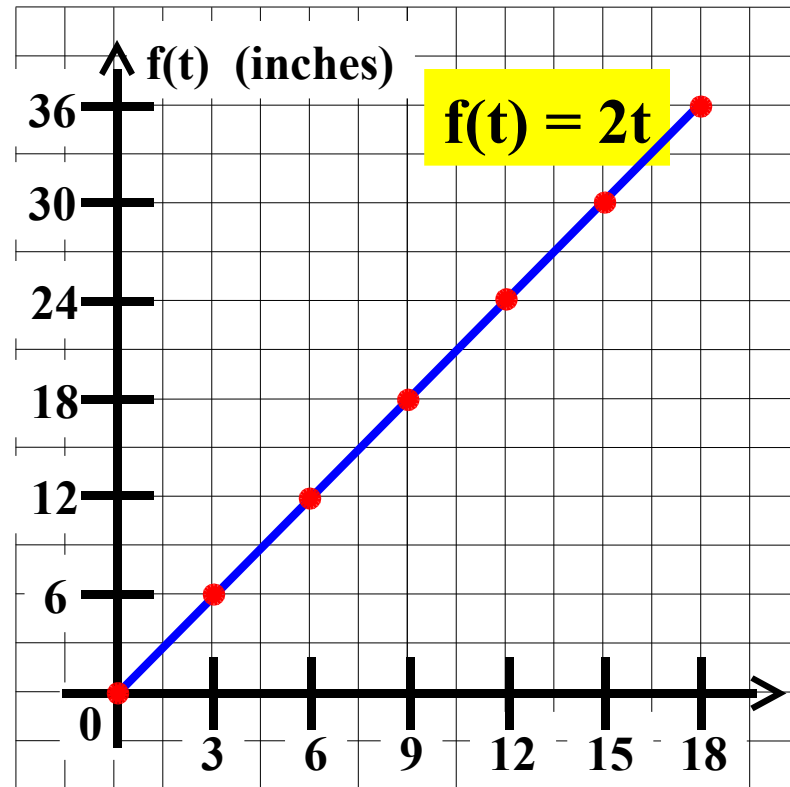| t	f(t)
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problem?**

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This represents the time it took for the water to be 30 inches deep.

Algebra II   Class Worksheet #5   Unit 3

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36

30

24

18

12

6

0

3   6   9   12   15   18

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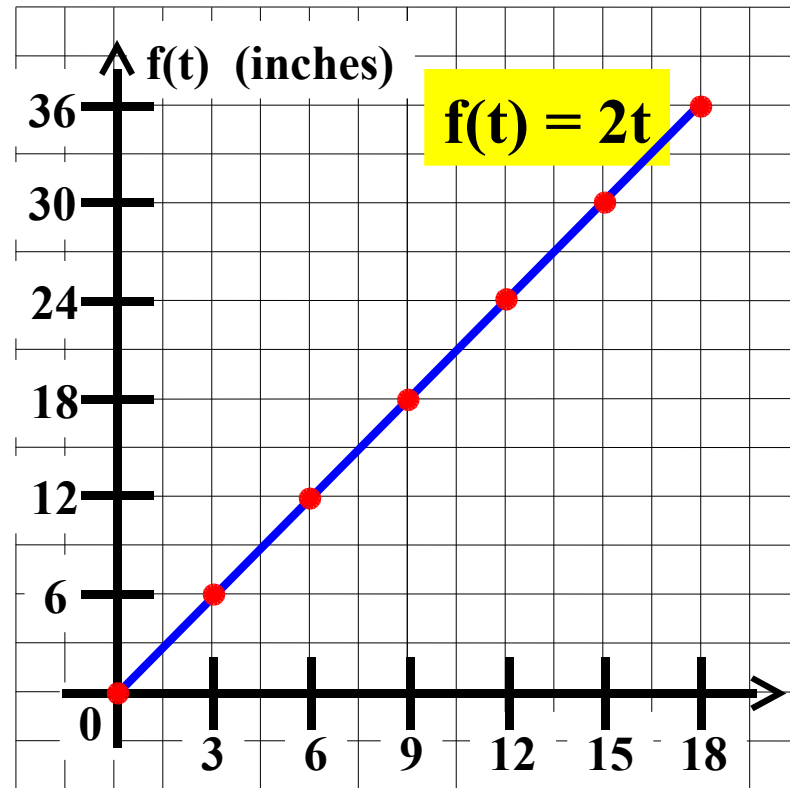| t	f(t)
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f(t) = 2t

t (minutes)

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

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Algebra II   Class Worksheet #5   Unit 3

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$$V = LWH$$

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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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$$V = 120$$

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$$V = 120 \text{ cu. ft.}$$

$$\text{Time} =$$

Algebra II   Class Worksheet #5   Unit 3

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$$\text{Time} = 120 \text{ cu. ft.} \div$$

Algebra II   Class Worksheet #5   Unit 3

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

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$$\text{Time} =$$

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5	
10	
15	
20	

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5	
10	
15	
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When t = 0, the tank is full.

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0	
5	
10	
15	
20	

When t = 0, the tank is full.

The water is 36 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**).
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t	F(t)
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5	
10	
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20	

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

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
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t	F(t)
0	36
5	
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⟹ 20	

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

Algebra II   Class Worksheet #5   Unit 3

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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.

# Algebra II Class Worksheet #5 Unit 3

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	

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.

Algebra II   Class Worksheet #5   Unit 3

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**).
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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

**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.**

Algebra II   Class Worksheet #5   Unit 3

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.

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Algebra II   Class Worksheet #5   Unit 3

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

The water depth decreases 36 inches.

Algebra II   Class Worksheet #5   Unit 3

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**).

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Algebra II   Class Worksheet #5   Unit 3

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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
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5	
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**The water depth decreases
36 inches in 20 minutes.**

**It decreases at 1.8 inches
per minute.**

Algebra II   Class Worksheet #5   Unit 3

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.

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It decreases at 1.8 inches per minute.

It decreases 9 inches every 5 minutes.

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Algebra II   Class Worksheet #5   Unit 3

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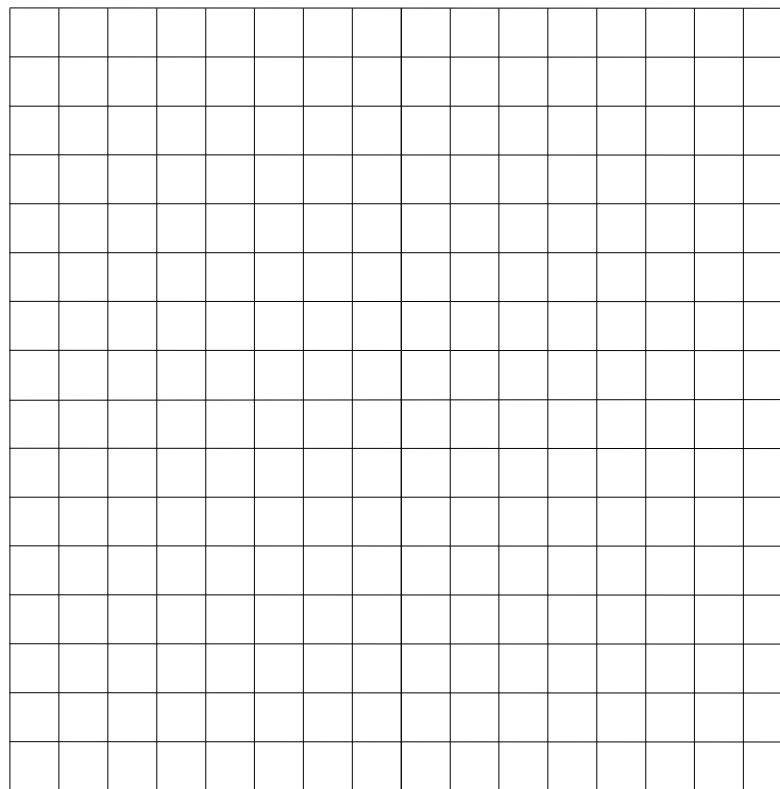Let F(t) represent the **depth of the water** in the tank (in **inches**).

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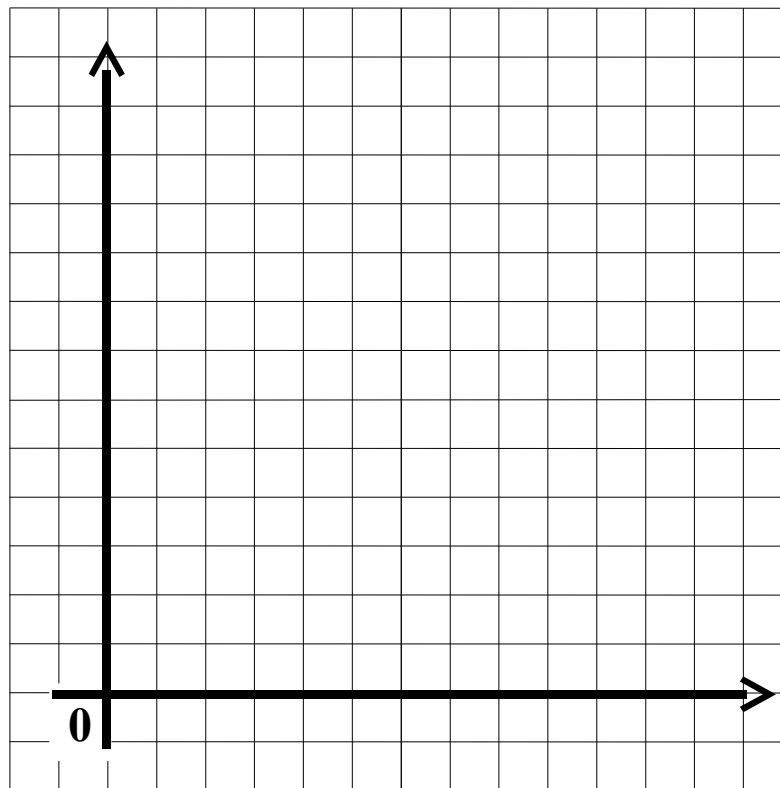Let F(t) represent the **depth of the water** in the tank (in **inches**).

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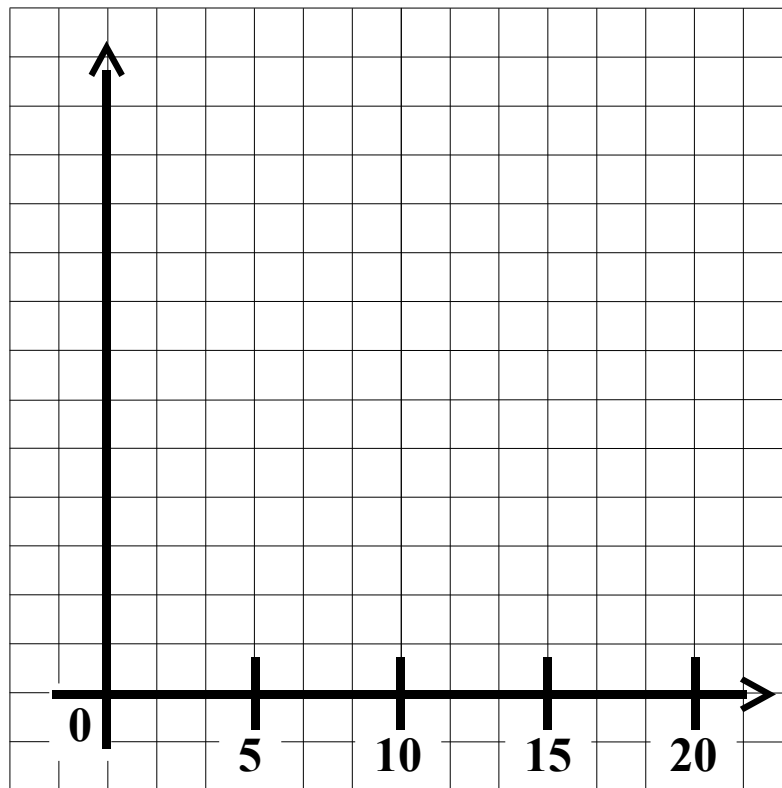Let F(t) represent the **depth of the water** in the tank (in **inches**).

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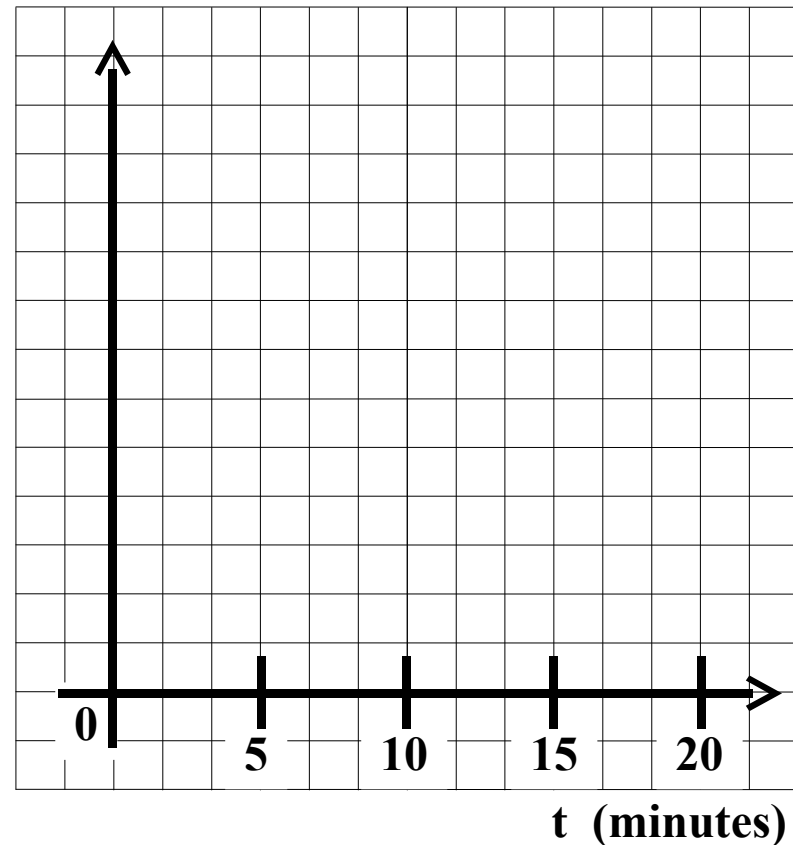
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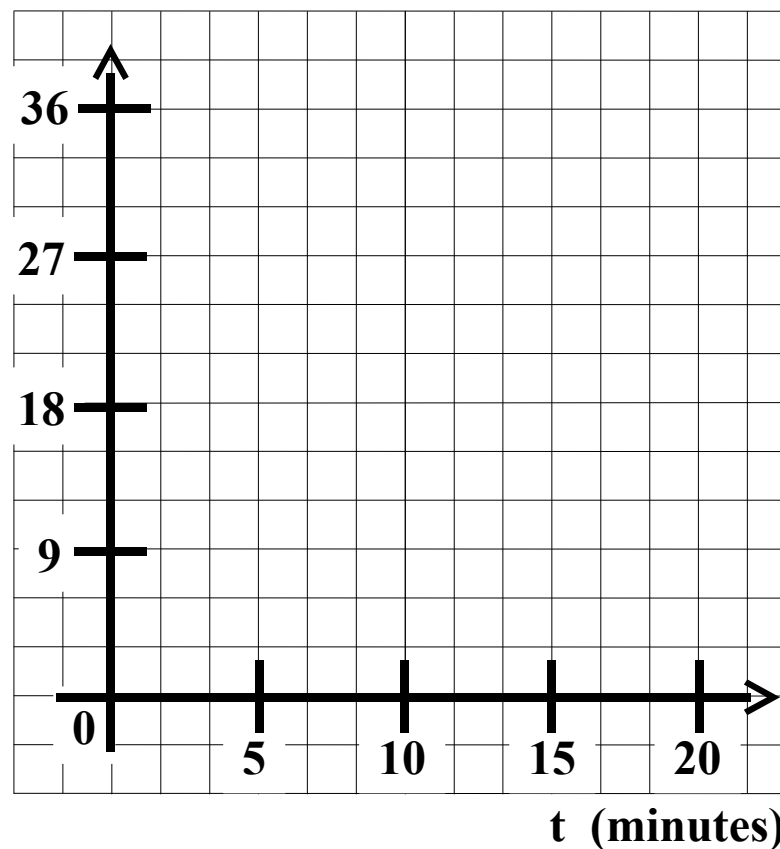Let F(t) represent the **depth of the water** in the tank (in **inches**).

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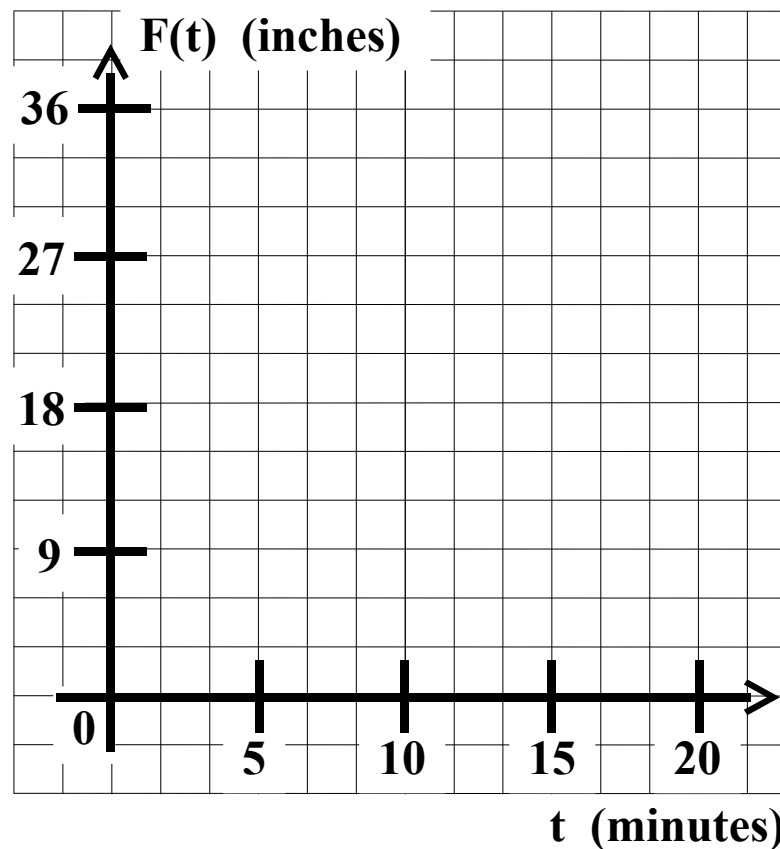Let F(t) represent the **depth of the water** in the tank (in **inches**).

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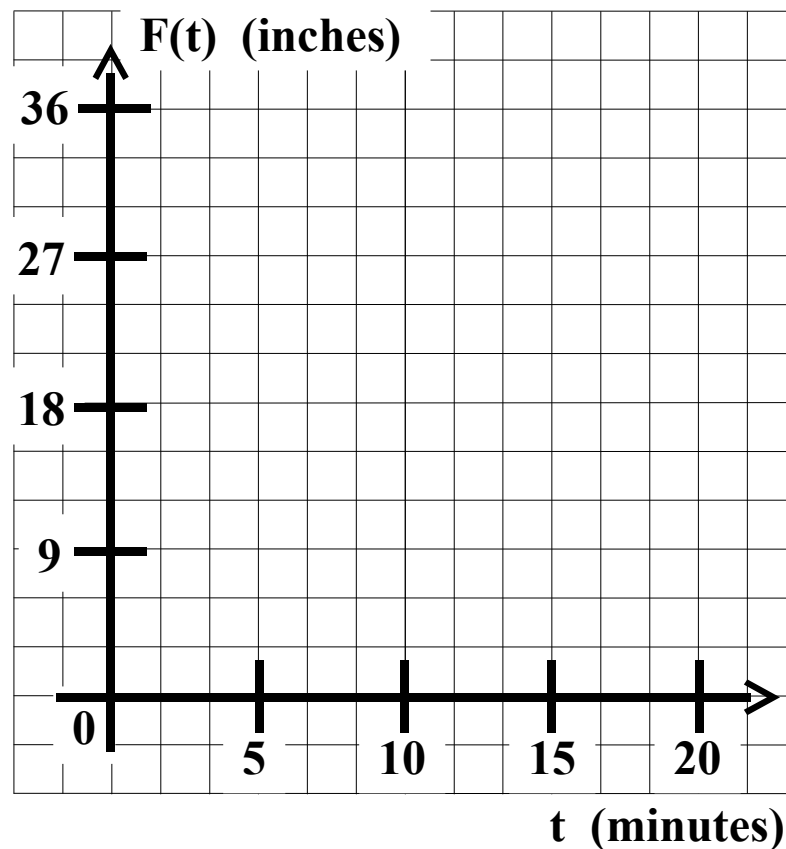Let F(t) represent the **depth of the water** in the tank (in **inches**).

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5	27
10	18
15	9
20	0

F(t) (inches)

36

27

18

9

0

5   10   15   20

t (minutes)

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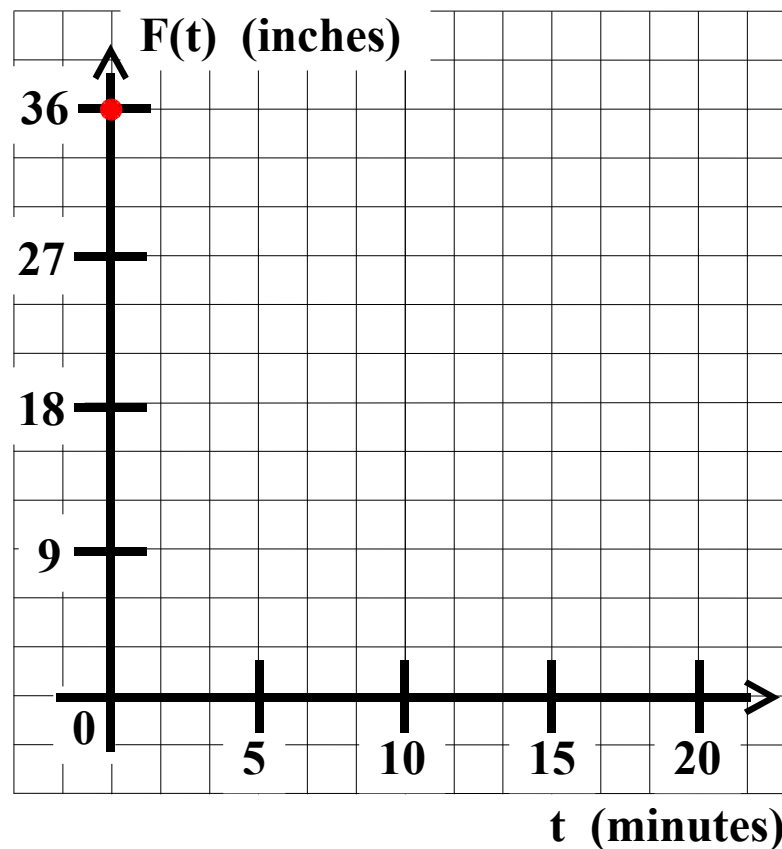Let F(t) represent the **depth of the water** in the tank (in **inches**).

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F(t) (inches)

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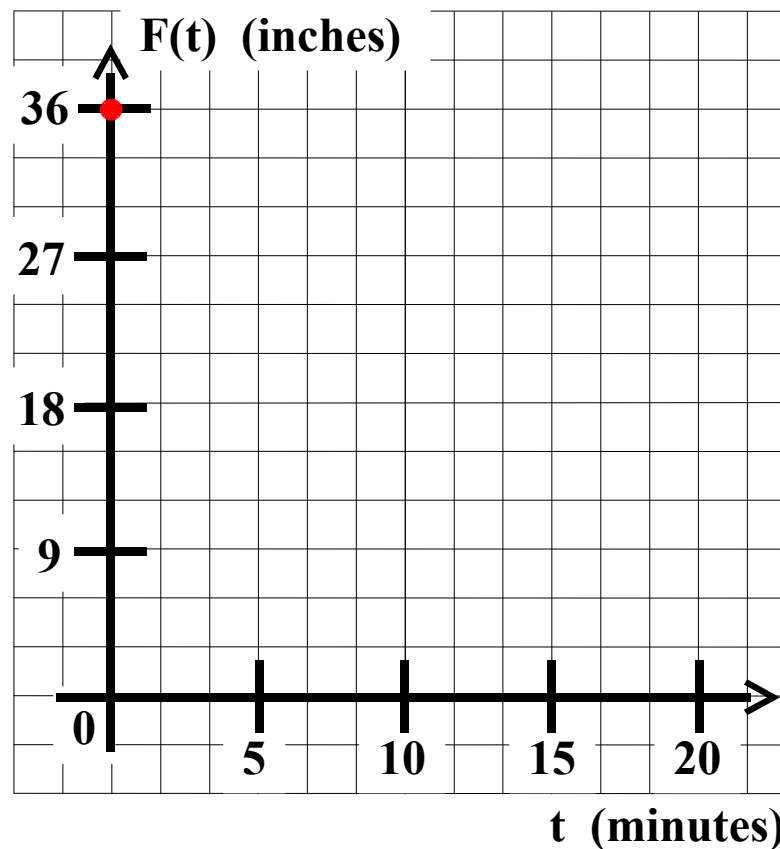Let F(t) represent the **depth of the water** in the tank (in **inches**).

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F(t) (inches)

36

27

18

9

0   5   10   15   20

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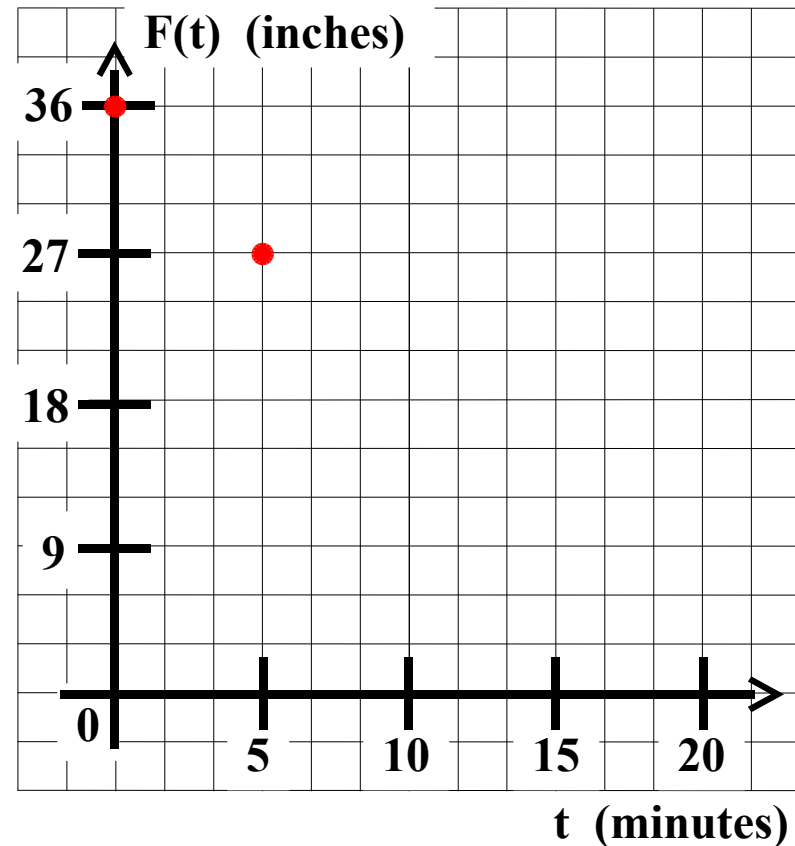Let F(t) represent the **depth of the water** in the tank (in **inches**).

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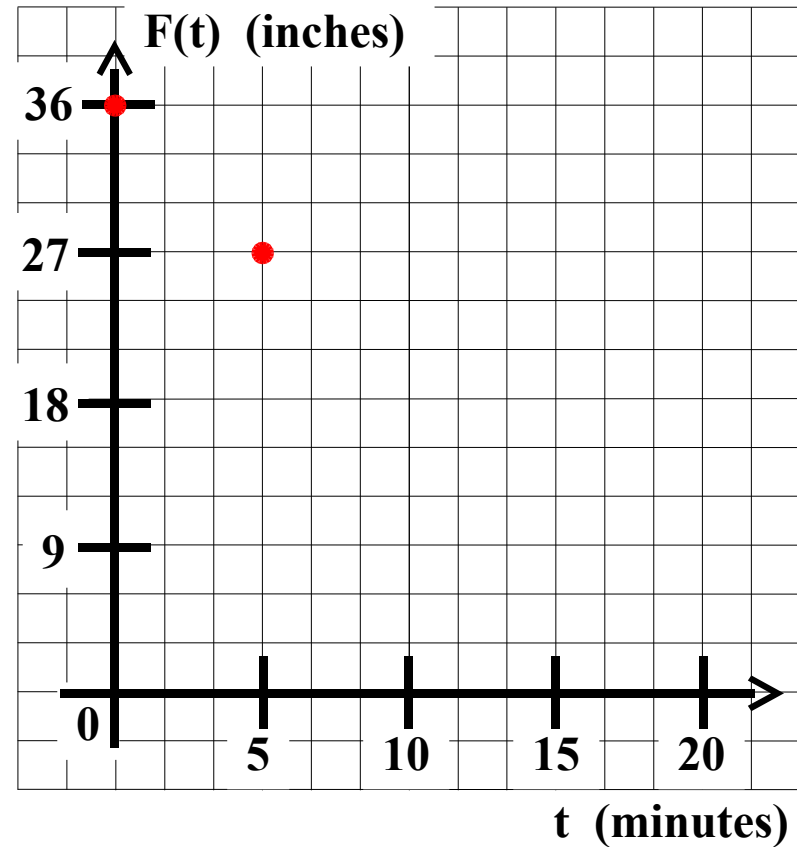Let F(t) represent the **depth of the water** in the tank (in **inches**).

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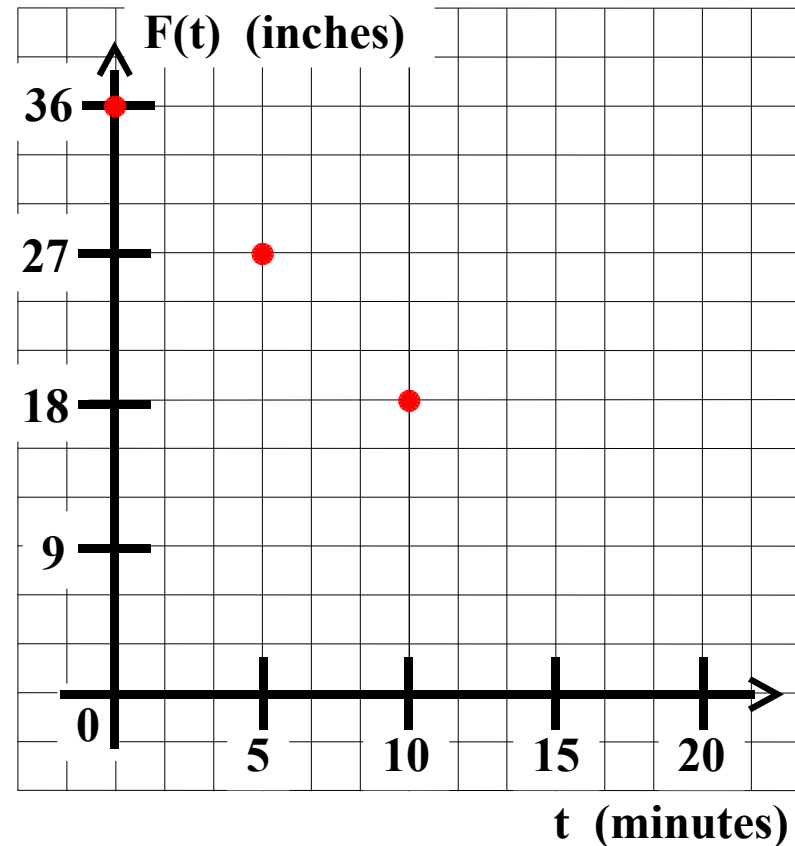Let F(t) represent the **depth of the water** in the tank (in **inches**).

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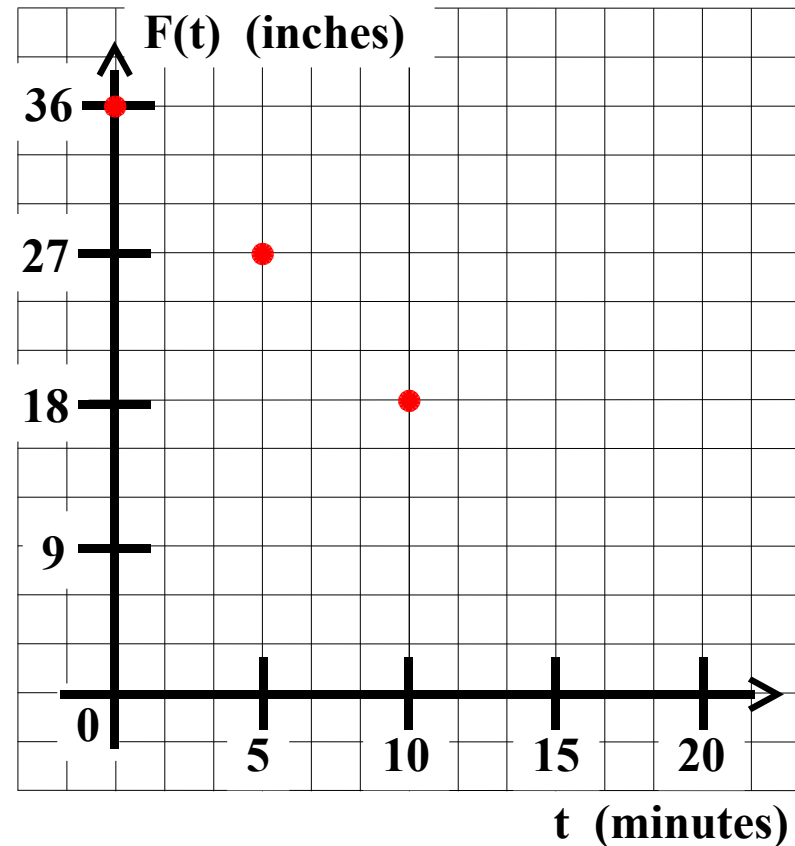
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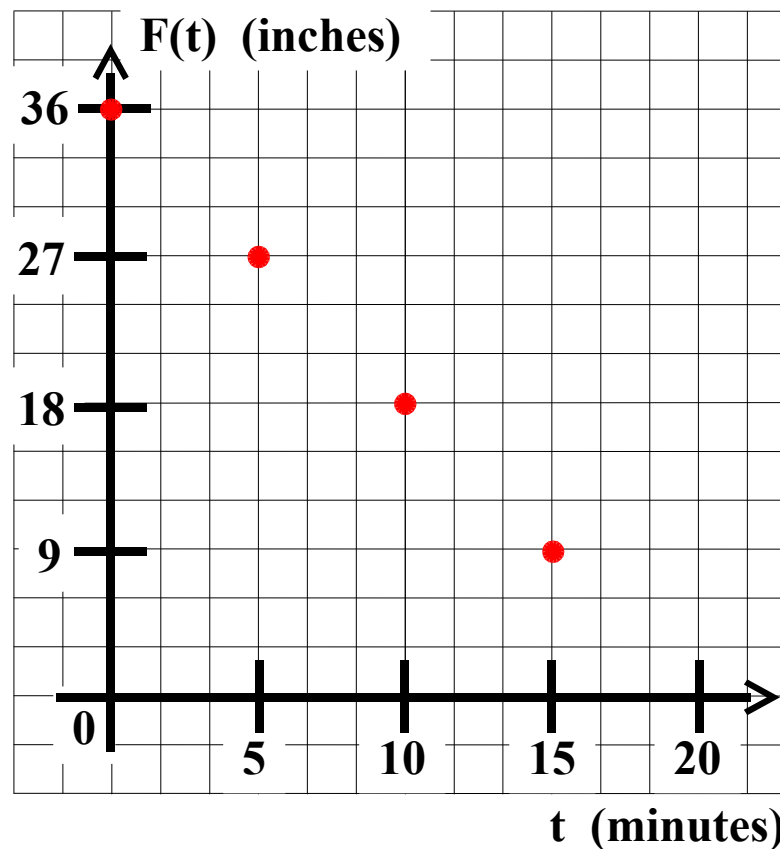Let F(t) represent the **depth of the water** in the tank (in **inches**).

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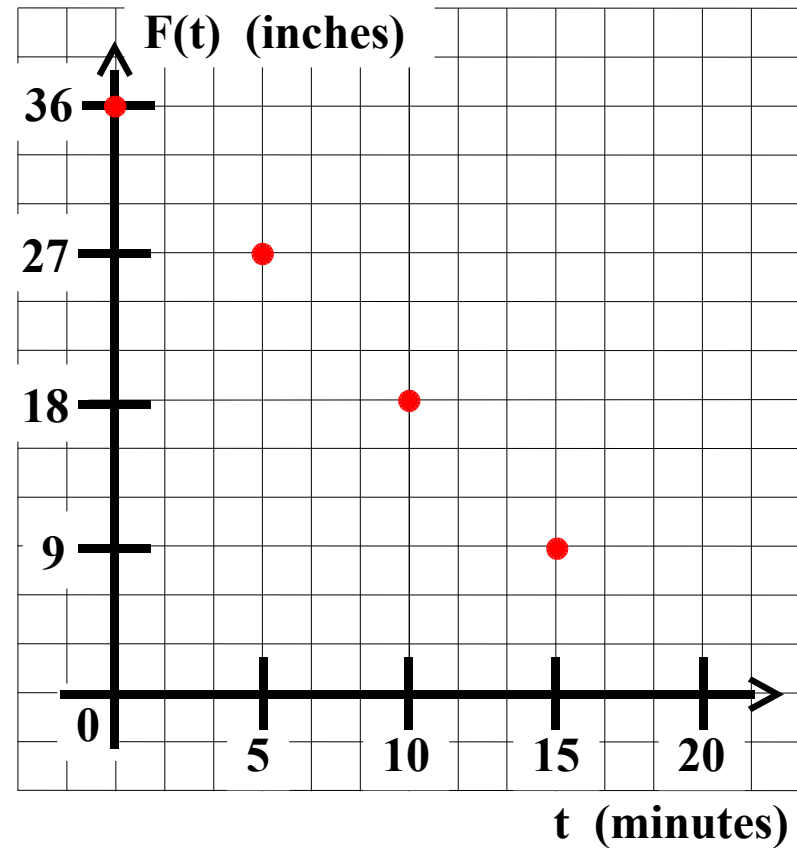Let F(t) represent the **depth of the water** in the tank (in **inches**).

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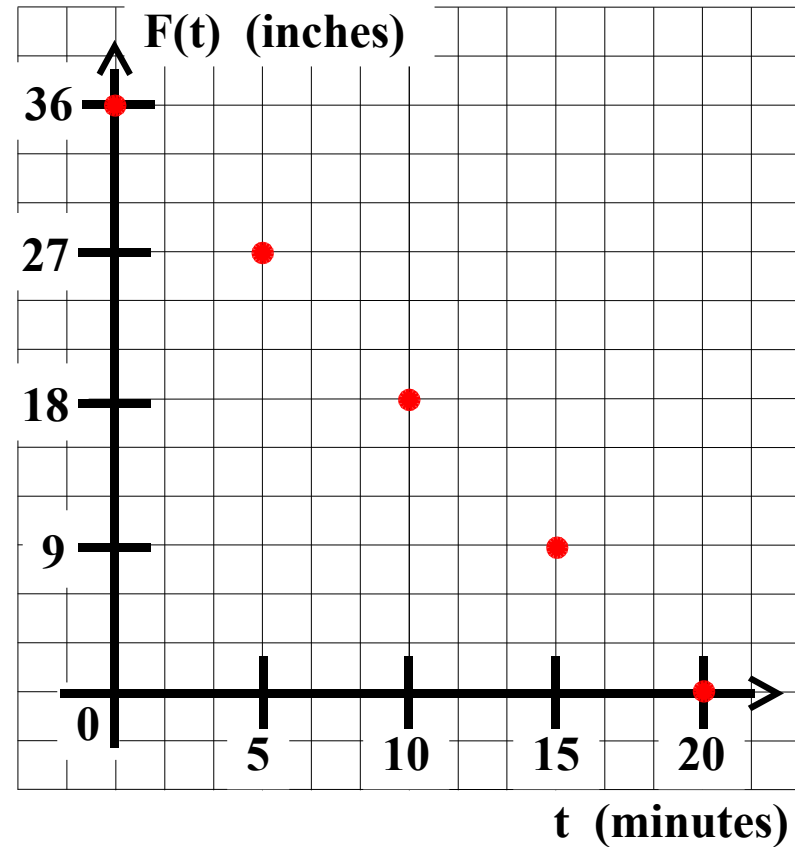Let F(t) represent the **depth of the water** in the tank (in **inches**).

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F(t) (inches)

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Algebra II   Class Worksheet #5   Unit 3

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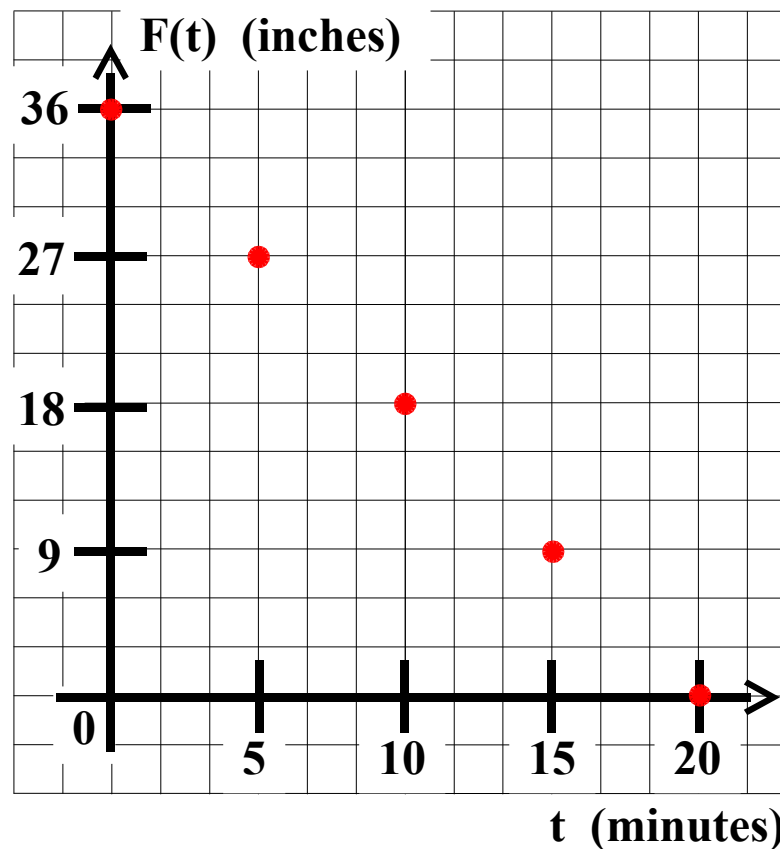Let F(t) represent the **depth of the water** in the tank (in **inches**).

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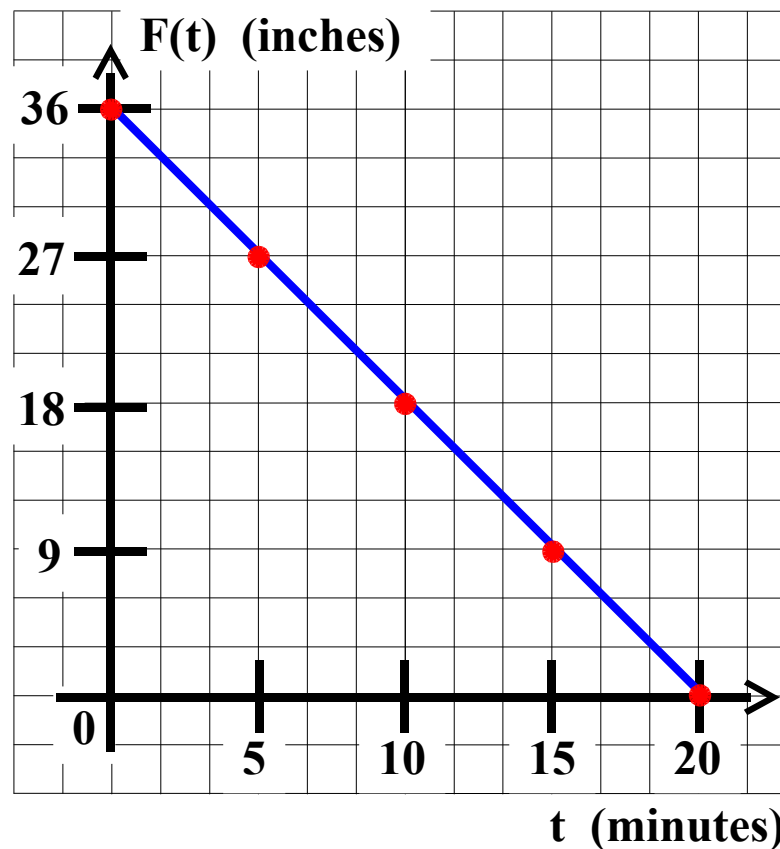Let F(t) represent the **depth of the water** in the tank (in **inches**).

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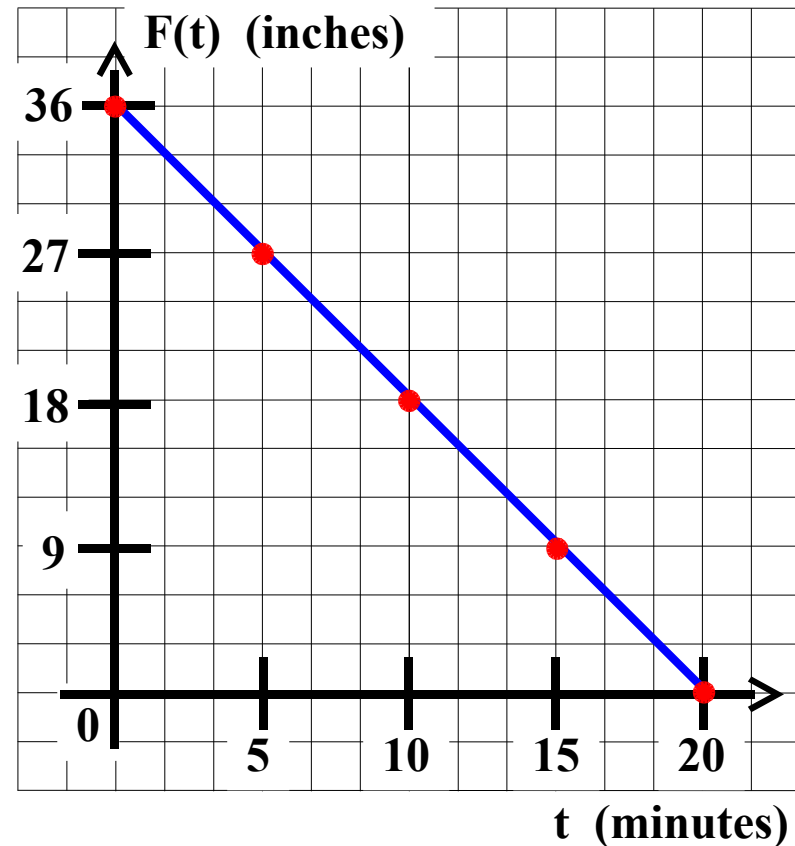Let t represent the time that water has been draining out of the tank (in **minutes**).
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F(t) (inches)

$$\text{Slope} = \frac{\text{rise}}{\text{run}}$$

36

27

18

9

0

5   10   15   20

t (minutes)

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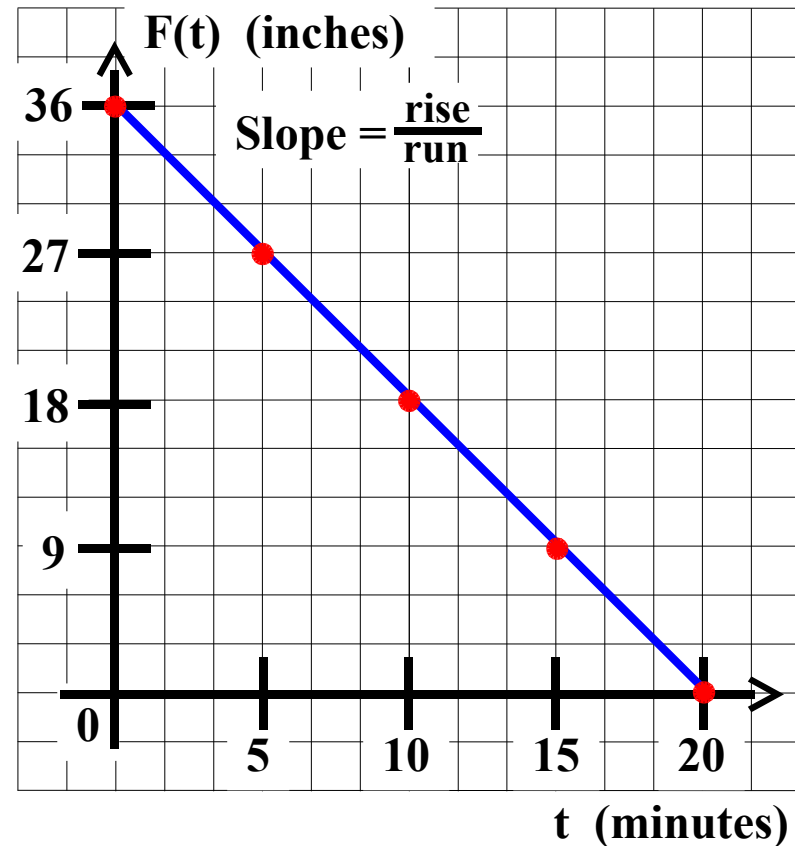Let t represent the time that water has been draining out of the tank (in **minutes**).
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rise

run

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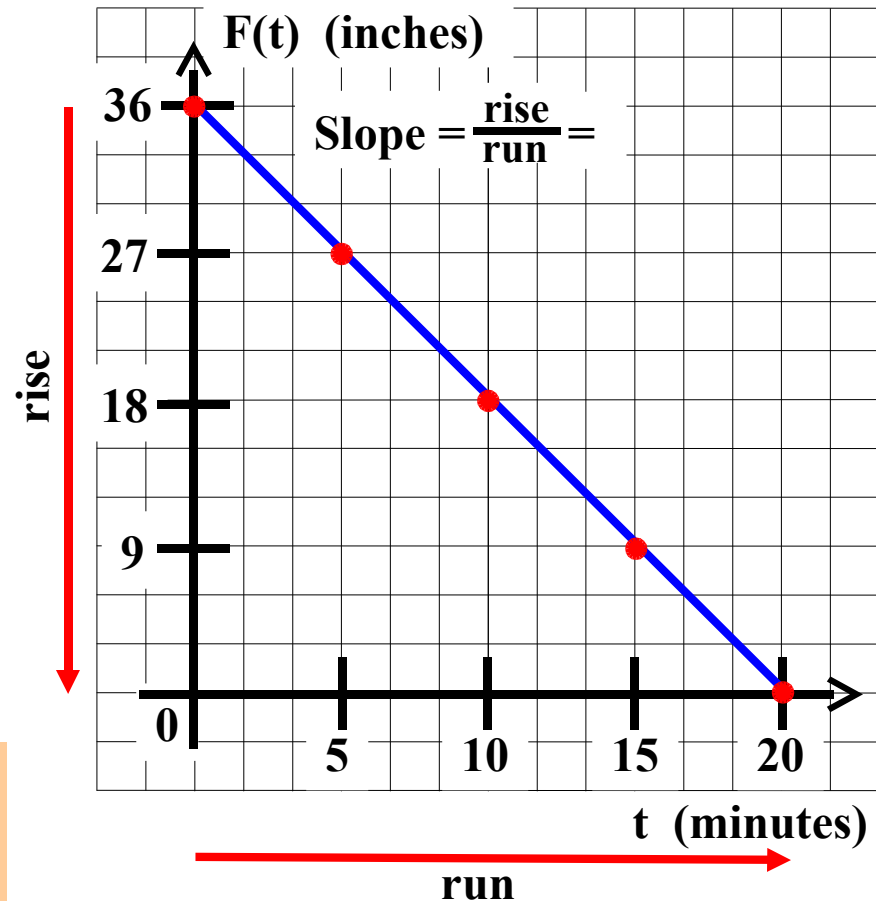
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$$\text{Slope} = \frac{\text{rise}}{\text{run}} = \frac{-36}{20}$$

rise

36

27

18

9

0

run

5   10   15   20

t (minutes)

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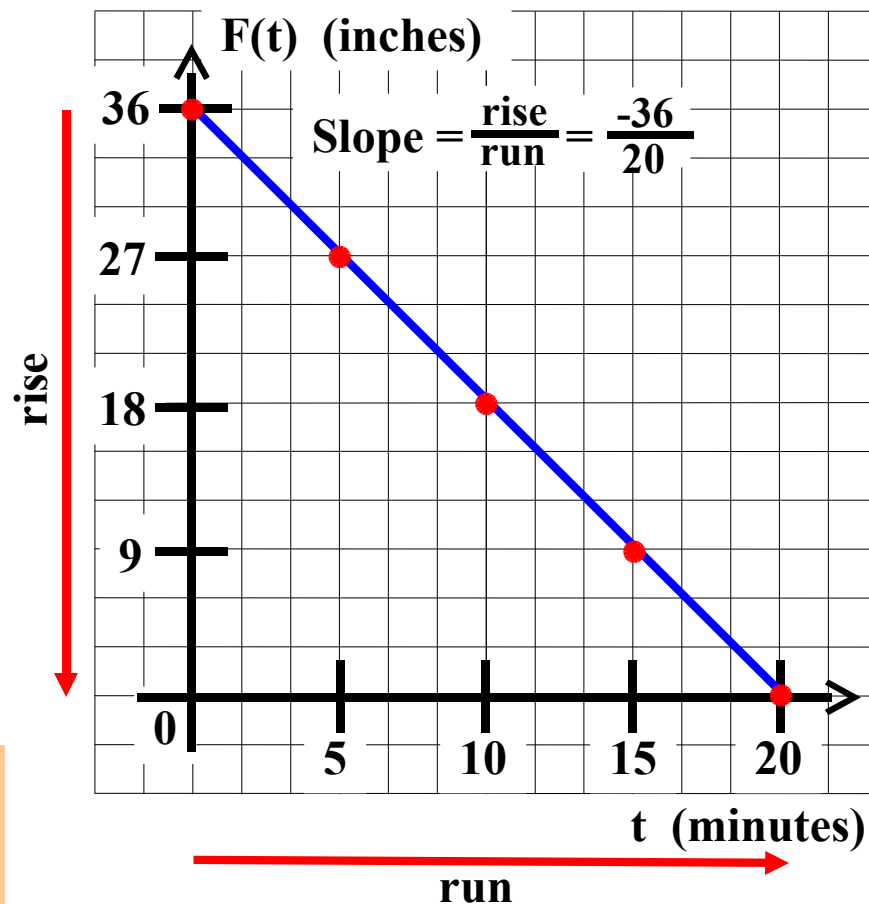Let F(t) represent the **depth of the water** in the tank (in **inches**).

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$$\text{Slope} = \frac{\text{rise}}{\text{run}} = \frac{-36}{20} = -1.8$$

rise

run

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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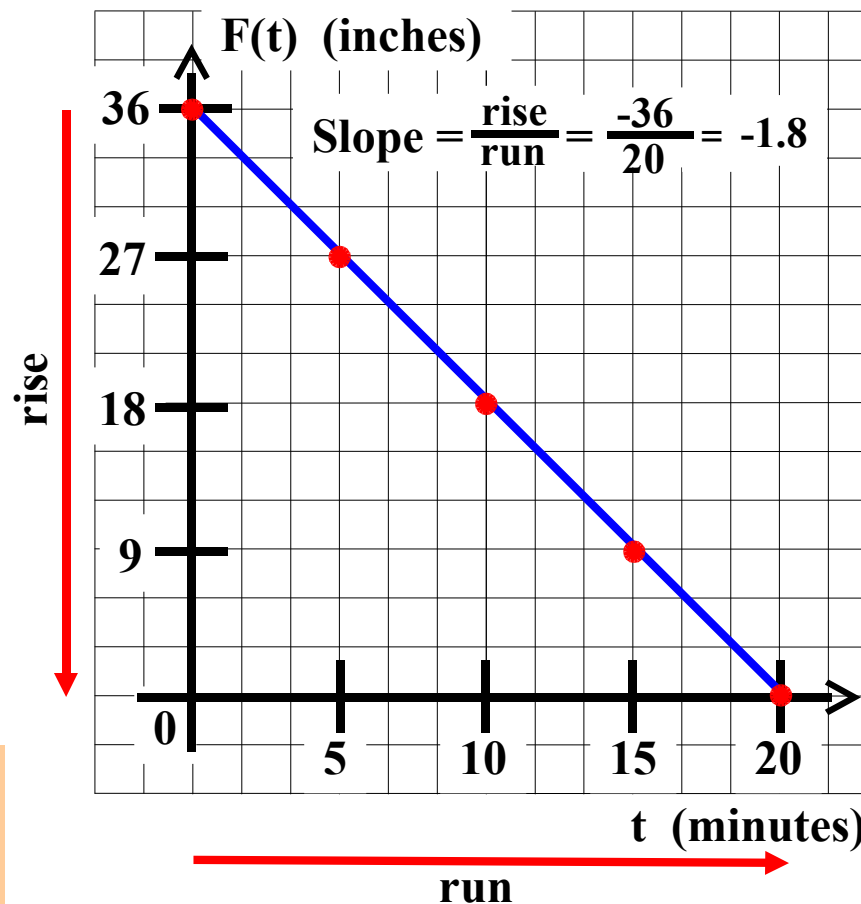Let F(t) represent the **depth of the water** in the tank (in **inches**).

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(inches per minute)

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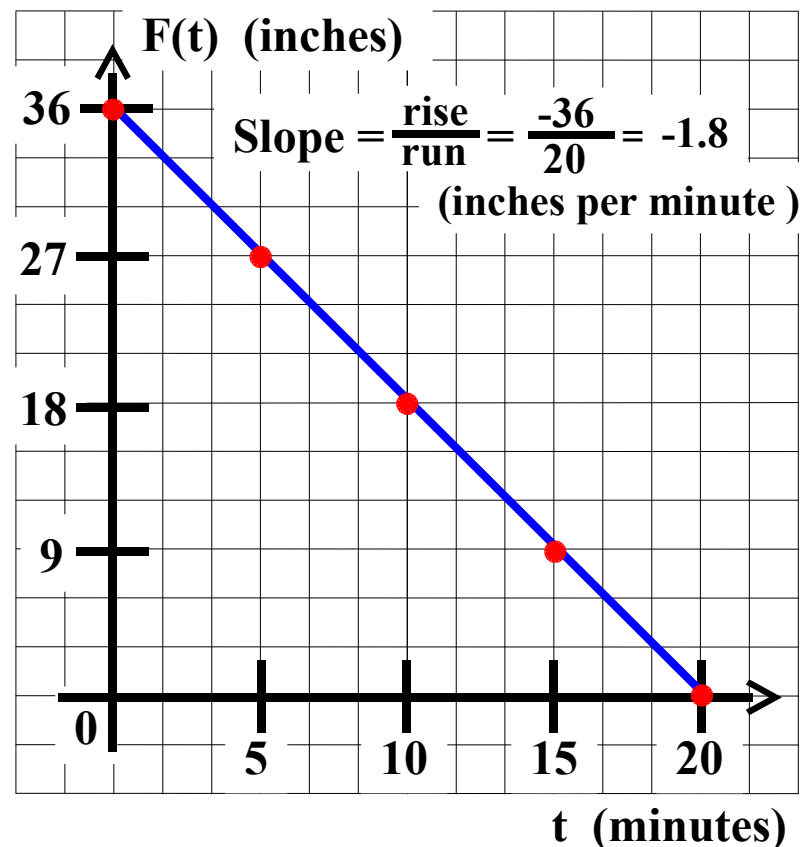Let F(t) represent the **depth of the water** in the tank (in **inches**).

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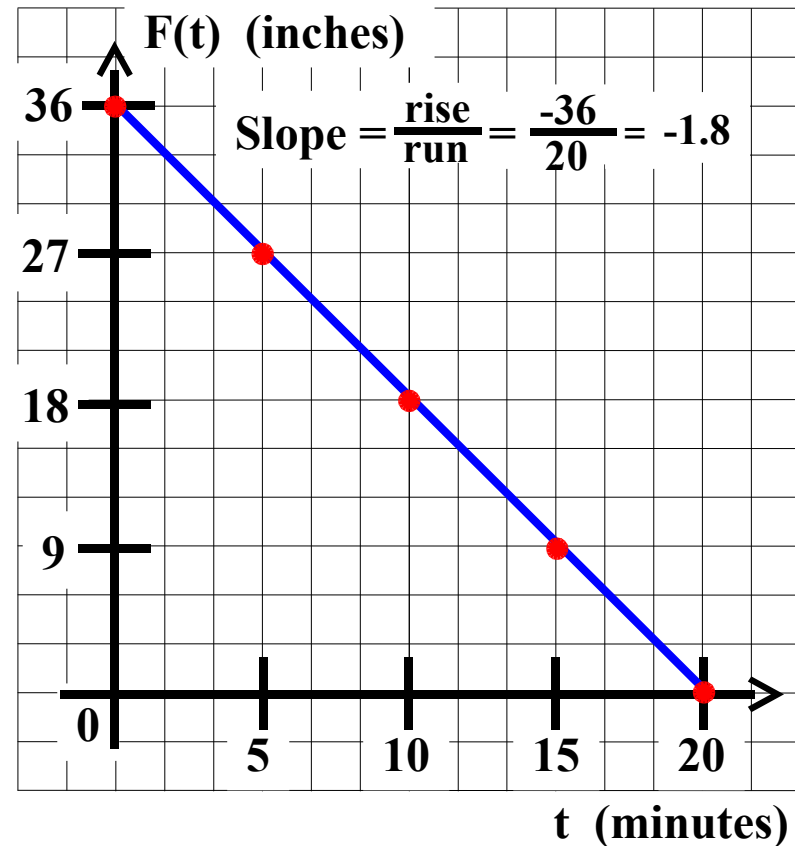Let t represent the time that water has been draining out of the tank (in **minutes**).

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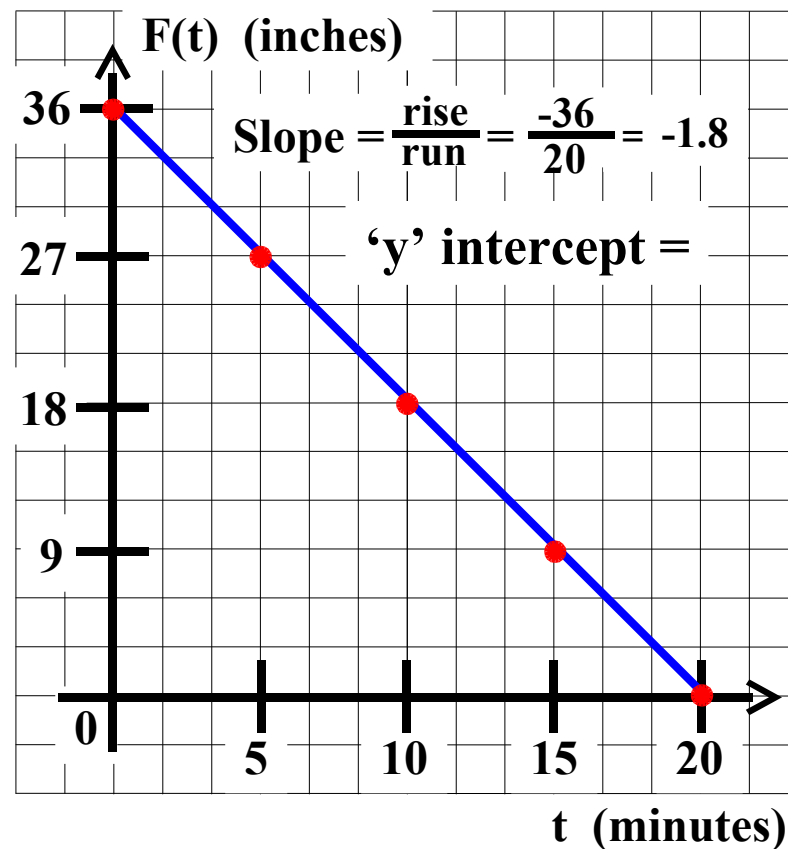
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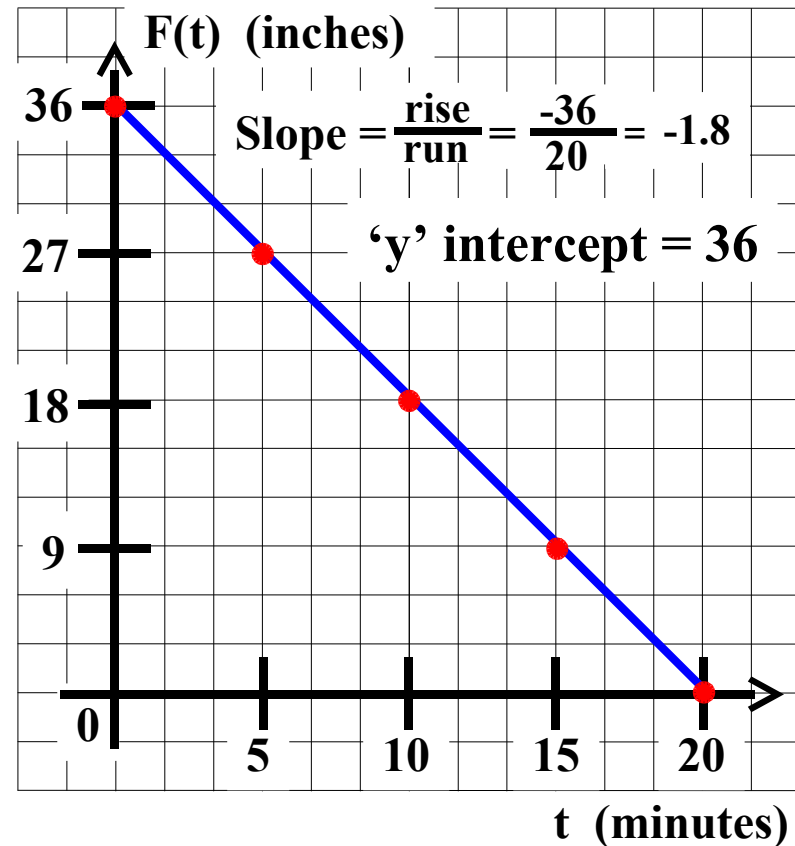Let t represent the time that water has been draining out of the tank (in **minutes**).
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$$y = mx + b$$

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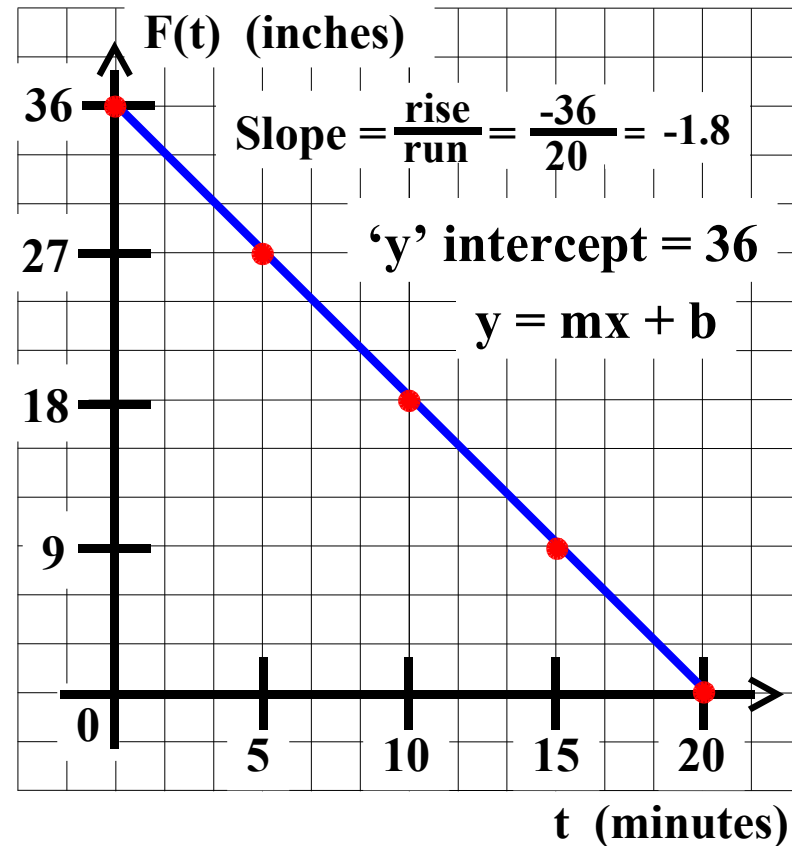Let F(t) represent the **depth of the water** in the tank (in **inches**).

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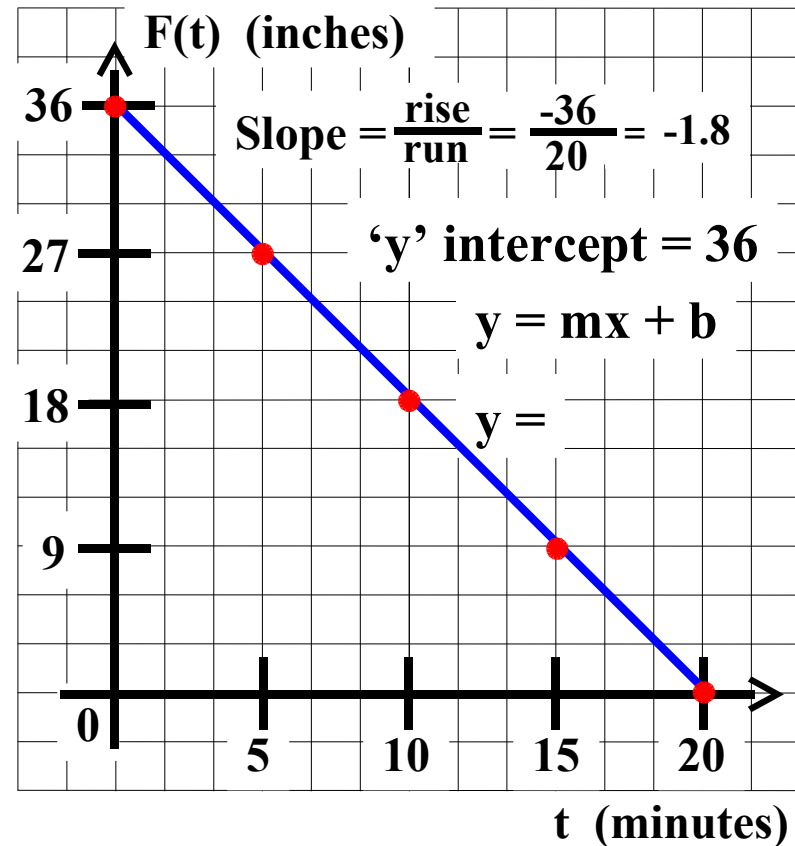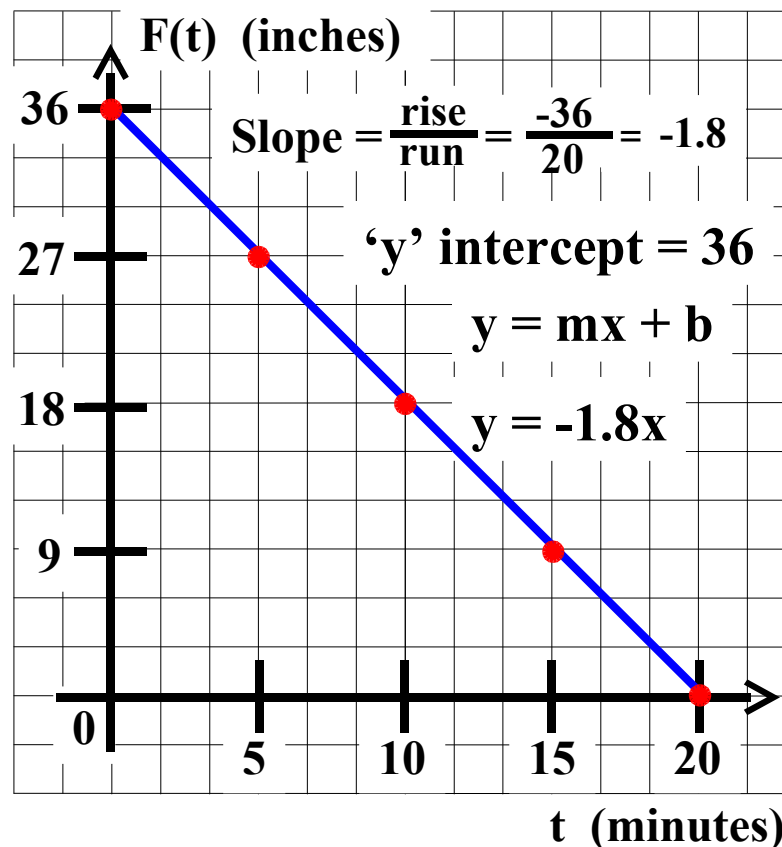Let F(t) represent the **depth of the water** in the tank (in **inches**).

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t (minutes)

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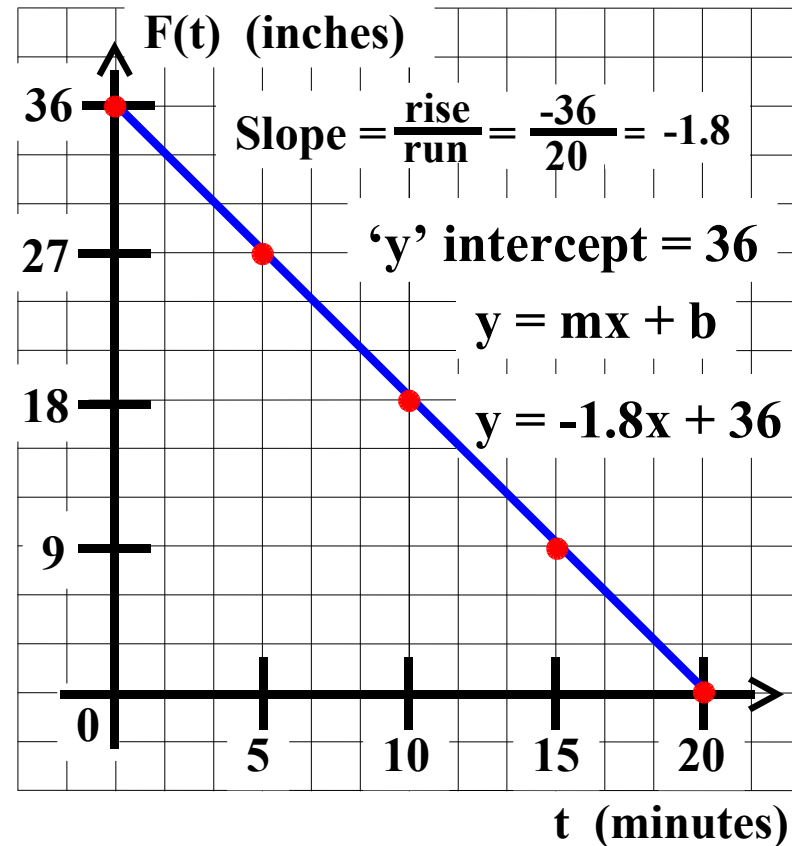Let F(t) represent the **depth of the water** in the tank (in **inches**).

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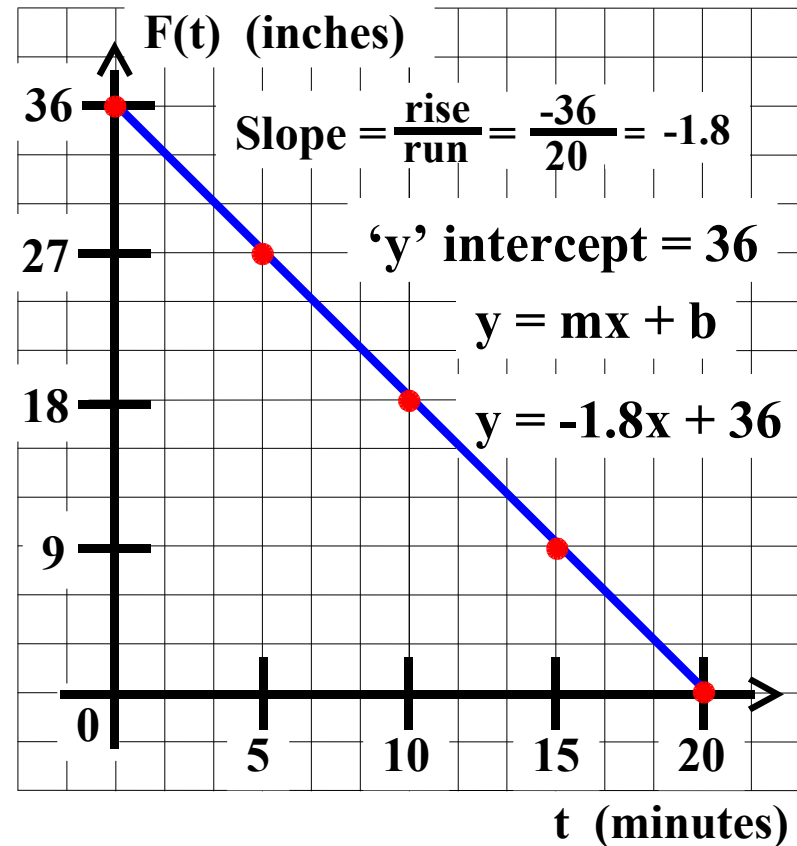Let F(t) represent the **depth of the water** in the tank (in **inches**).

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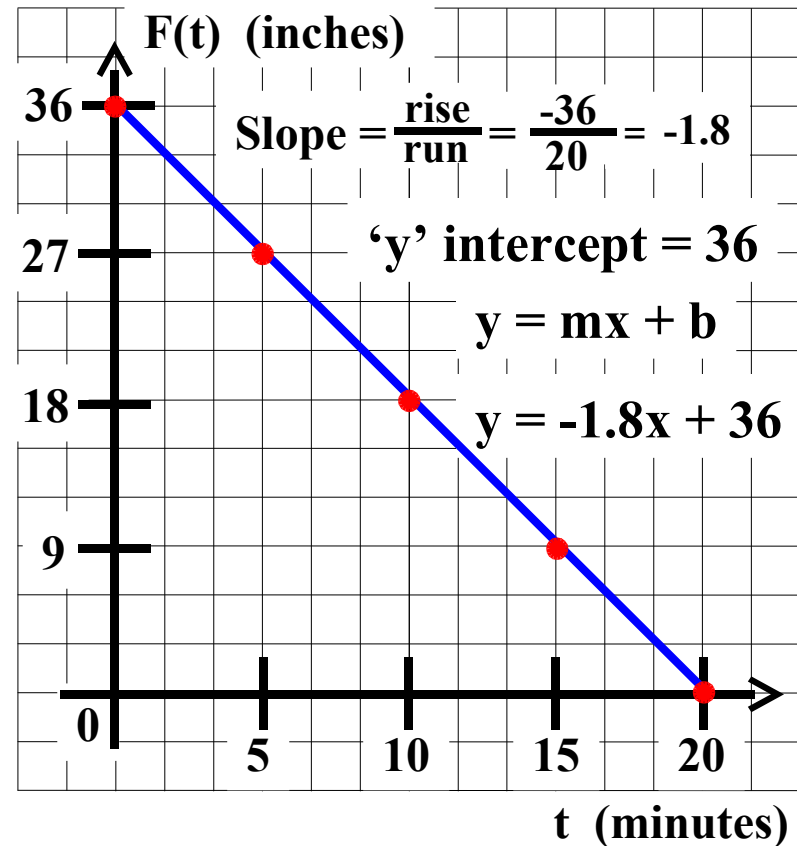Let F(t) represent the **depth of the water** in the tank (in **inches**).

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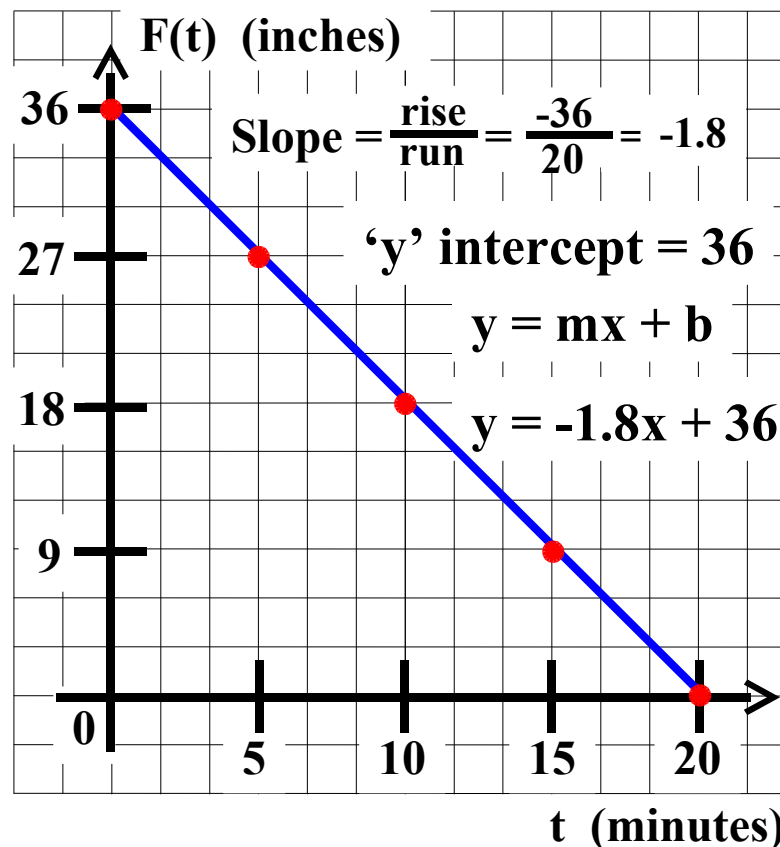Let F(t) represent the **depth of the water** in the tank (in **inches**).

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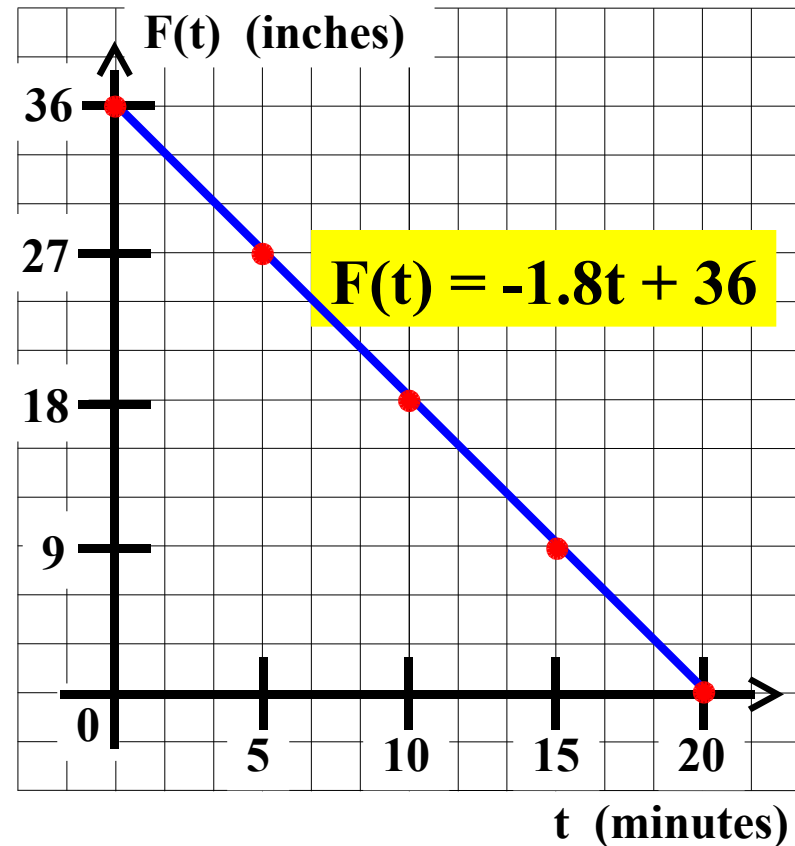Let t represent the time that water has been draining out of the tank (in **minutes**).
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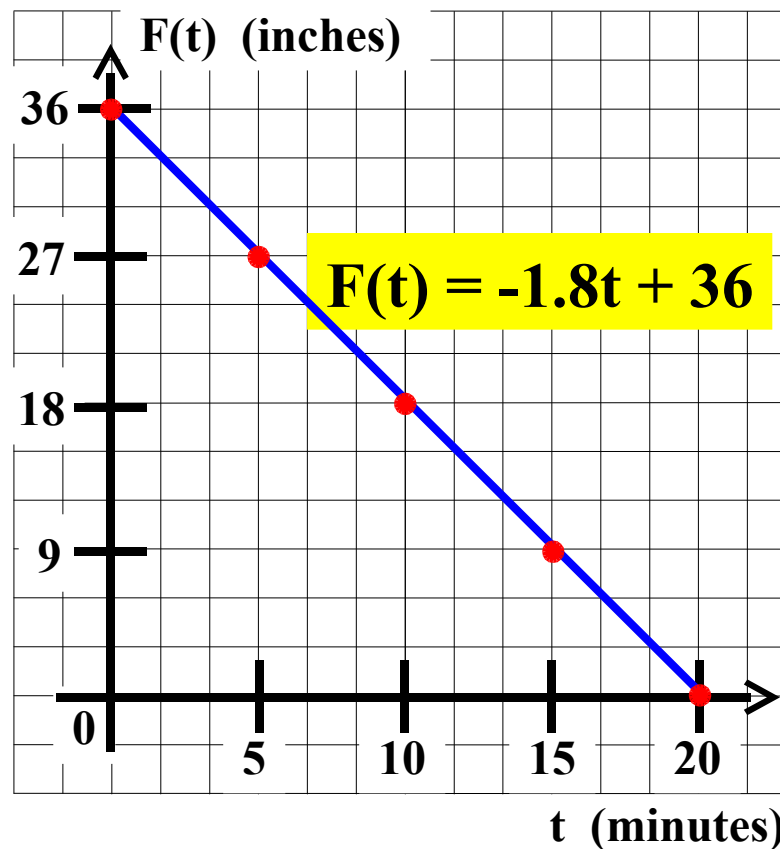Let F(t) represent the **depth of the water** in the tank (in **inches**).

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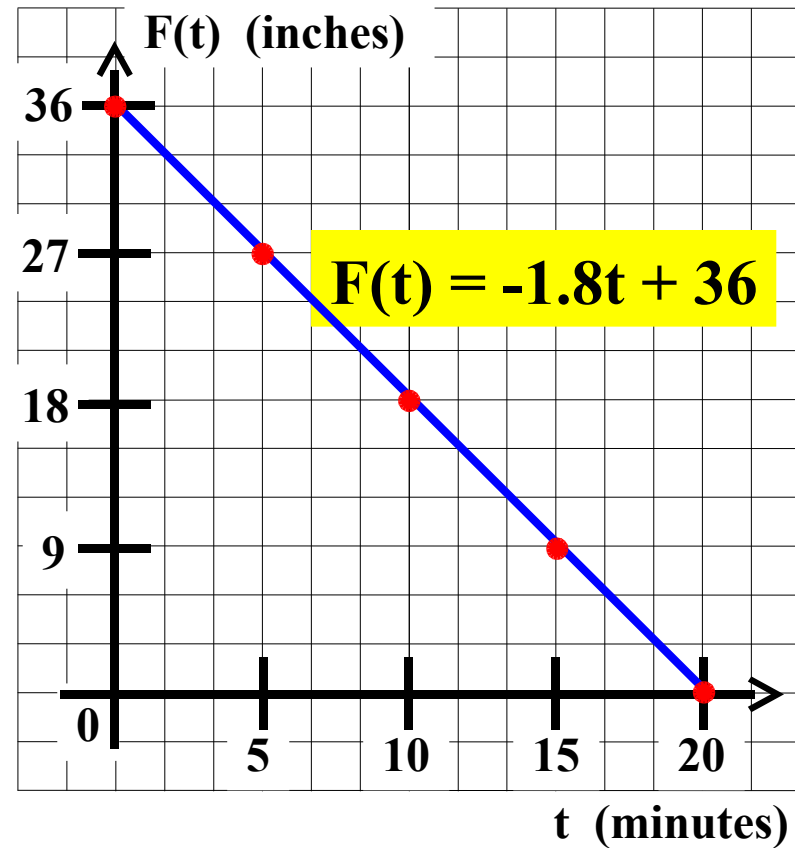Let t represent the time that water has been draining out of the tank (in **minutes**).
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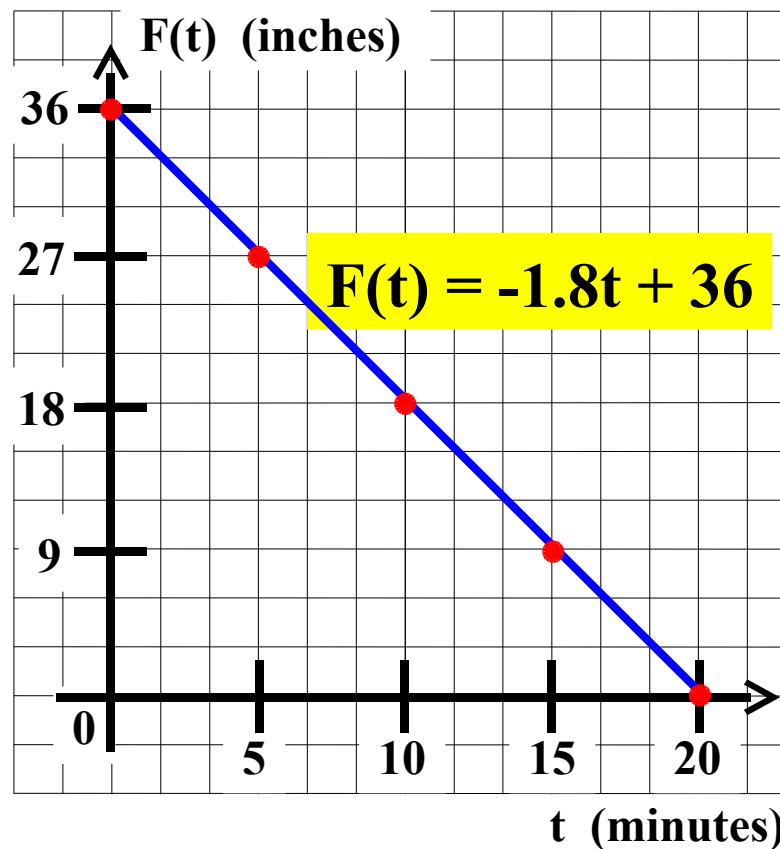Let F(t) represent the **depth of the water** in the tank (in **inches**).

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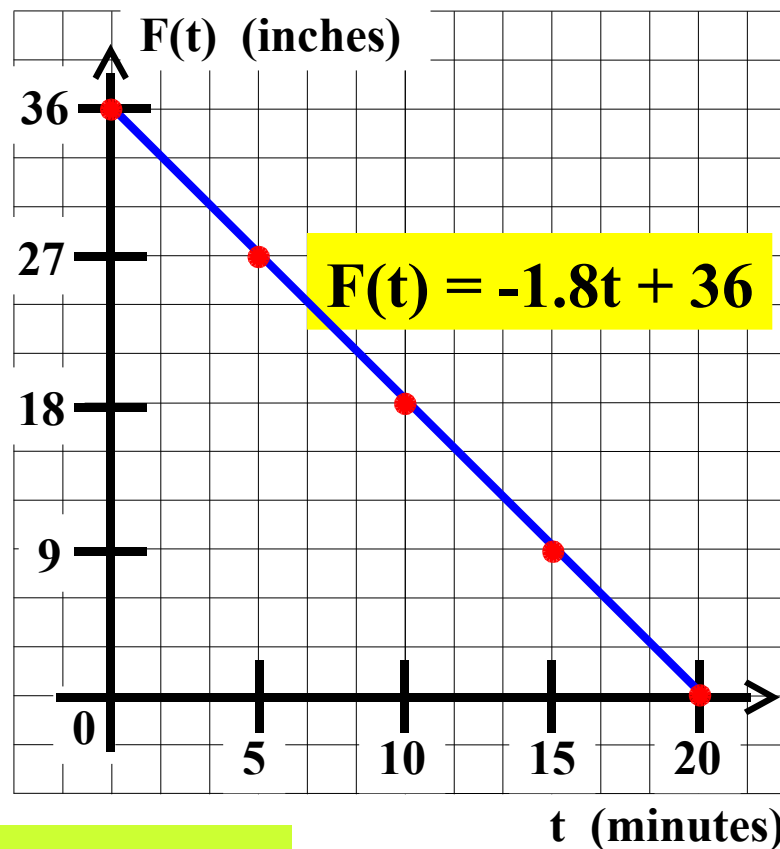Let F(t) represent the **depth of the water** in the tank (in **inches**).

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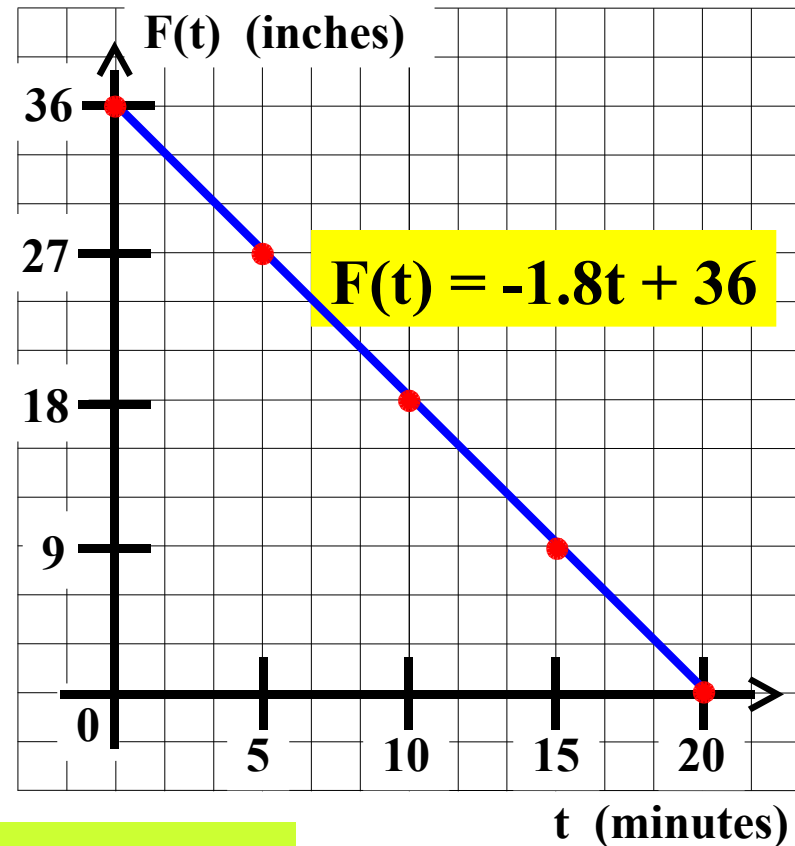
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10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.

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

$F(t) = -1.8t + 36$

F(t) (inches)

t (minutes)

13. What is the domain of function F?   [0,

Algebra II   Class Worksheet #5   Unit 3

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.
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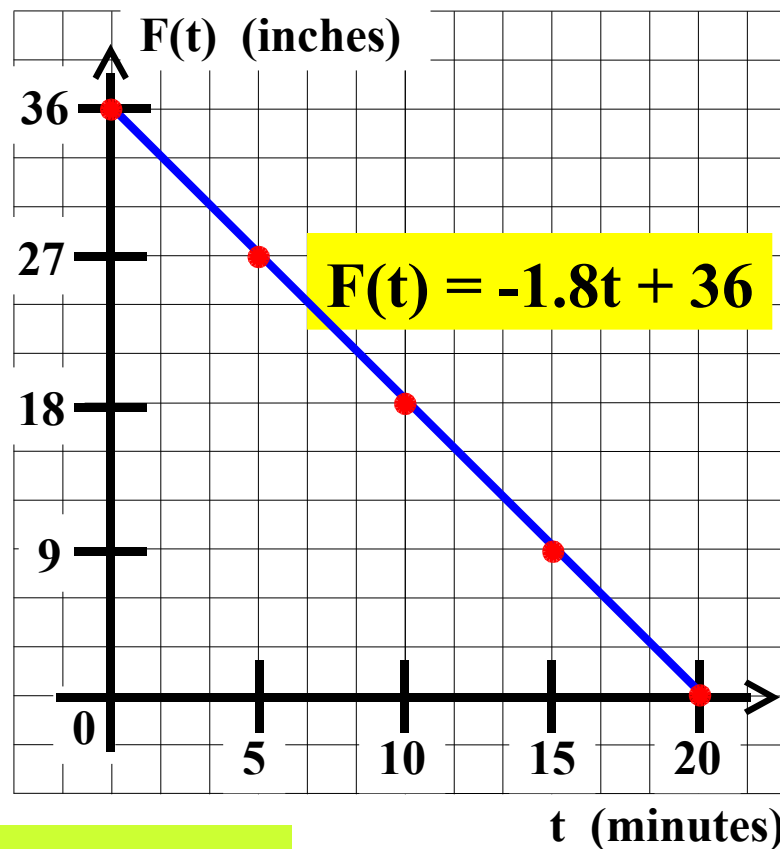Let F(t) represent the **depth of the water** in the tank (in **inches**).

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18

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0

5   10   15   20

t (minutes)

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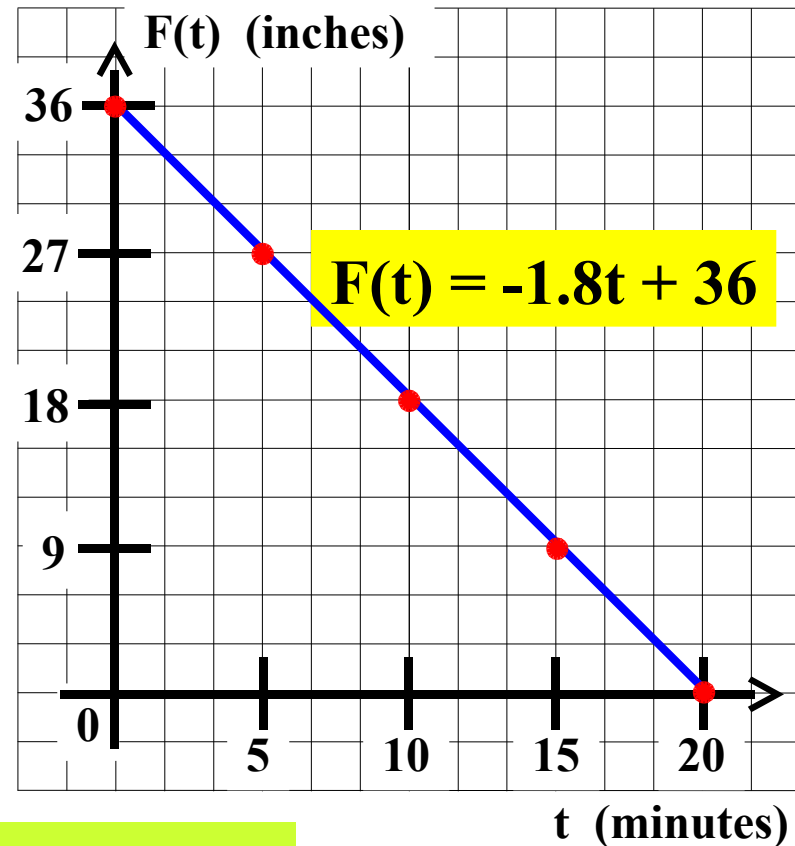
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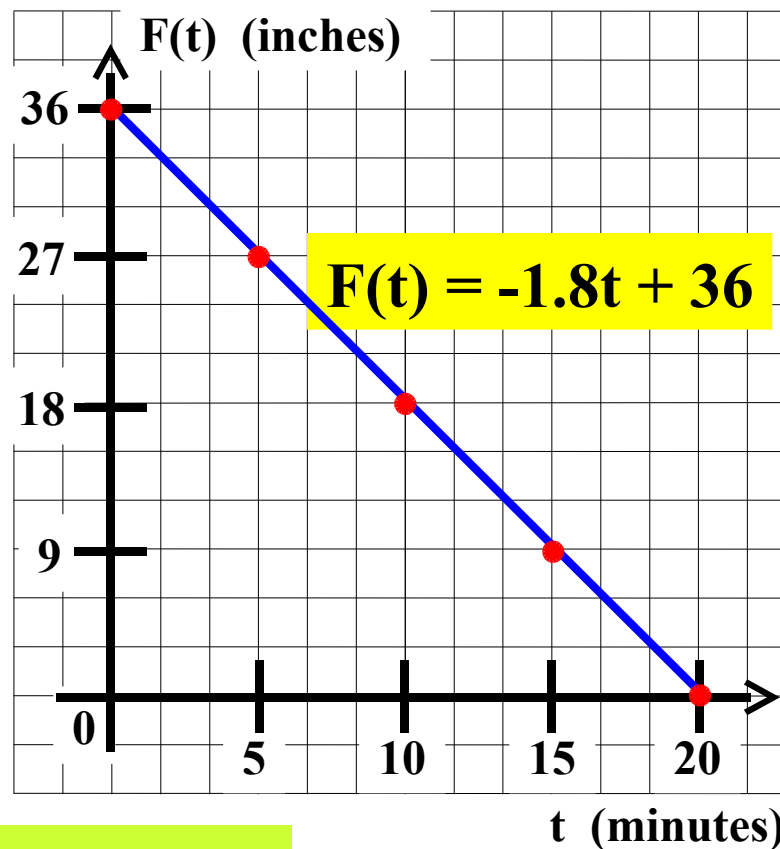Let F(t) represent the **depth of the water** in the tank (in **inches**).

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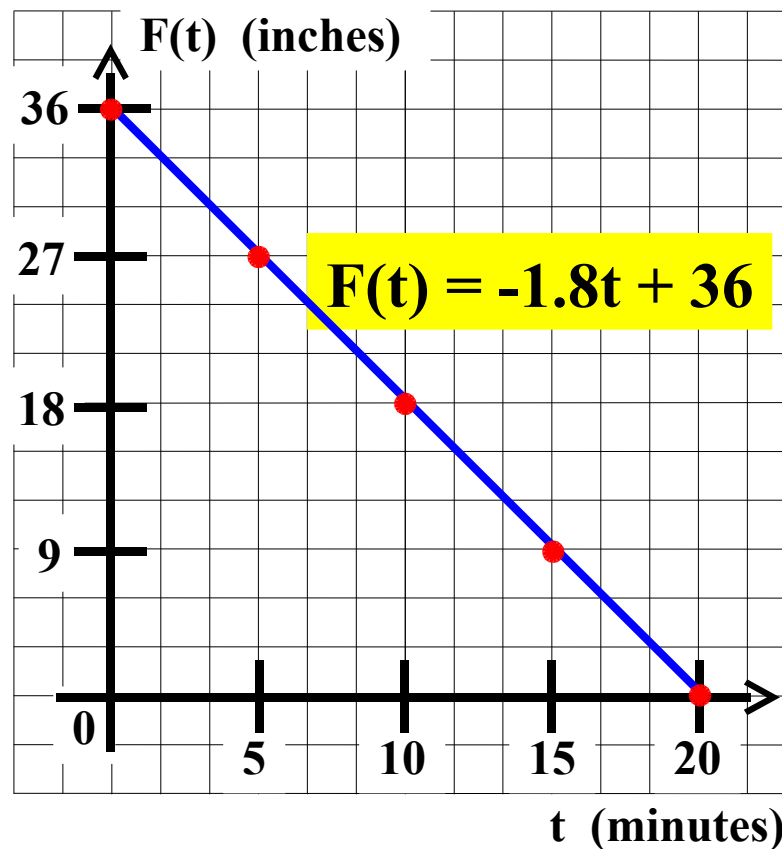
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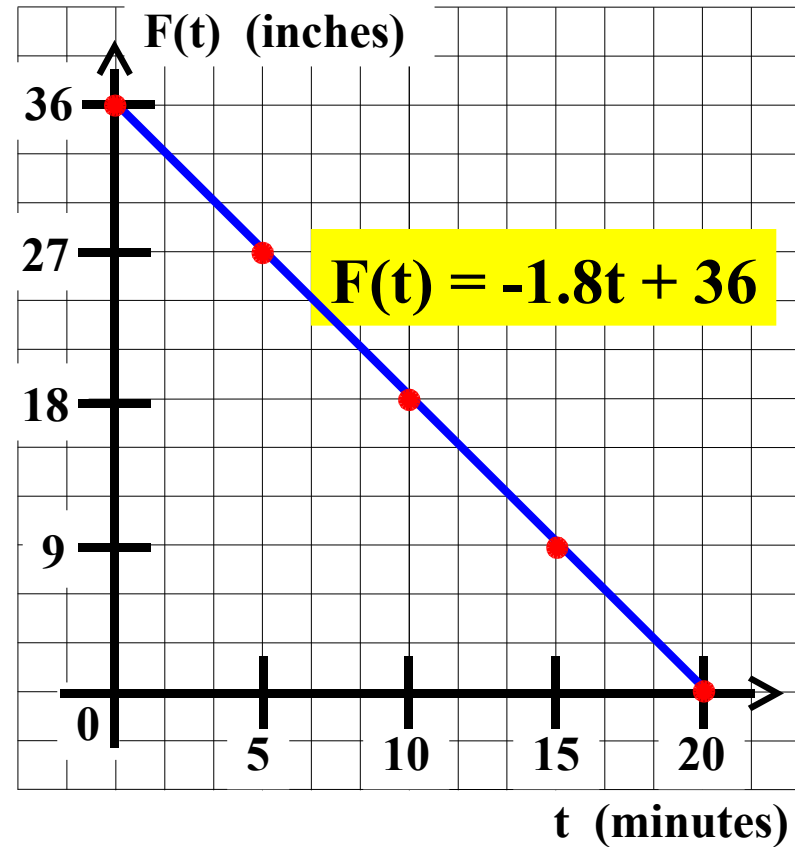Let F(t) represent the **depth of the water** in the tank (in **inches**).

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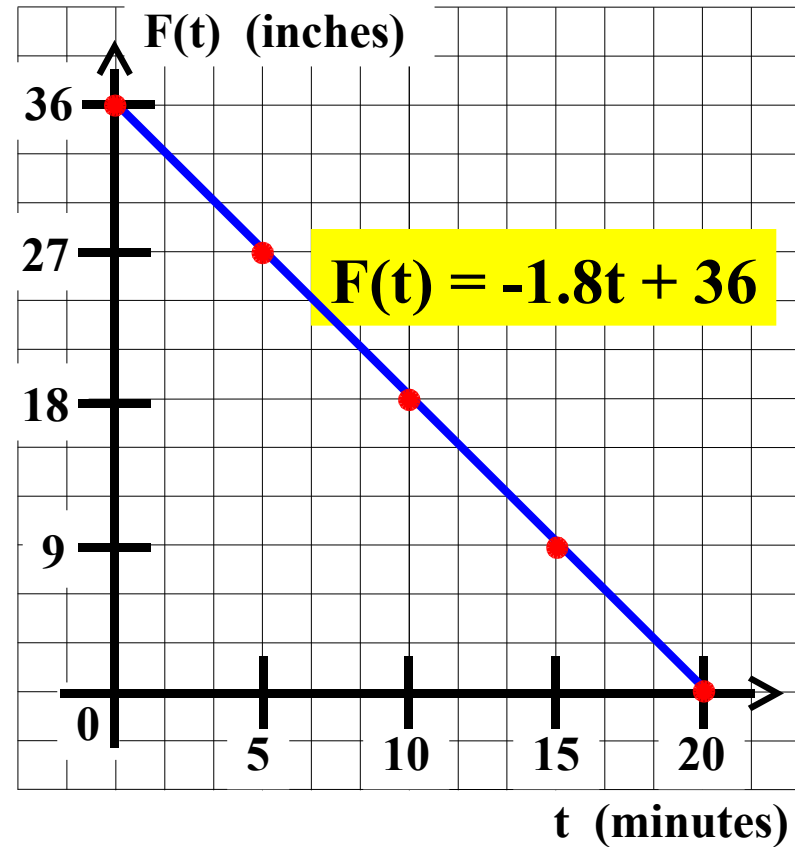Let F(t) represent the **depth of the water** in the tank (in **inches**).

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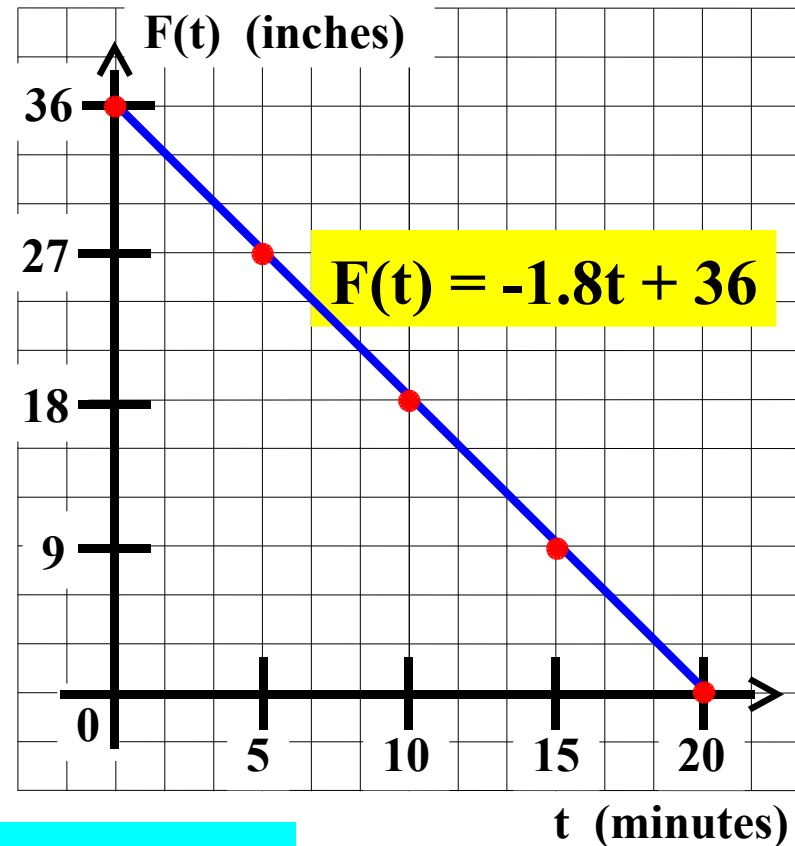Let F(t) represent the **depth of the water** in the tank (in **inches**).

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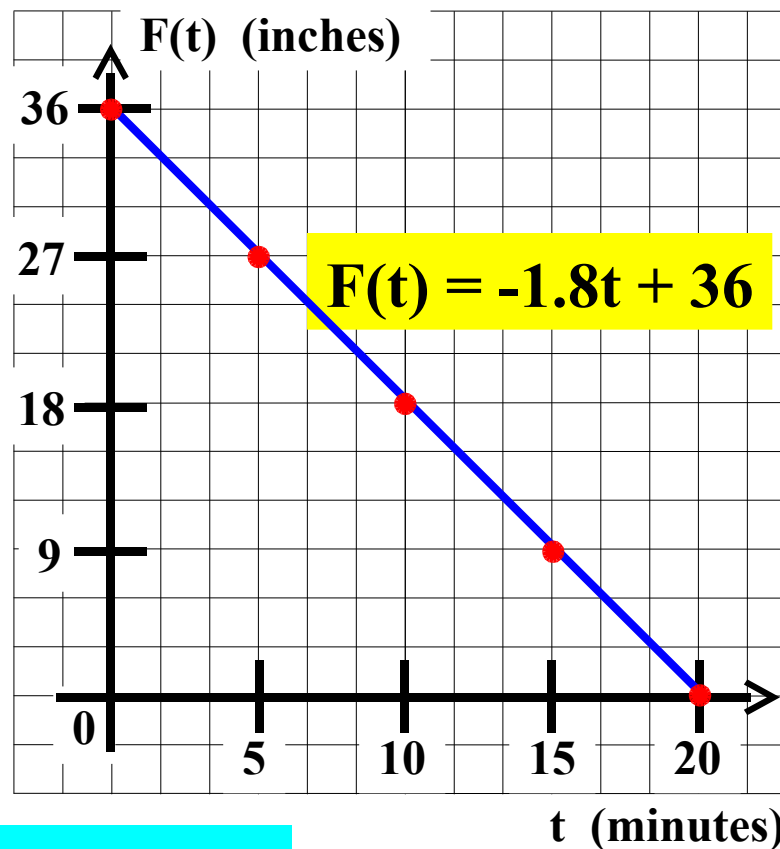Let F(t) represent the **depth of the water** in the tank (in **inches**).

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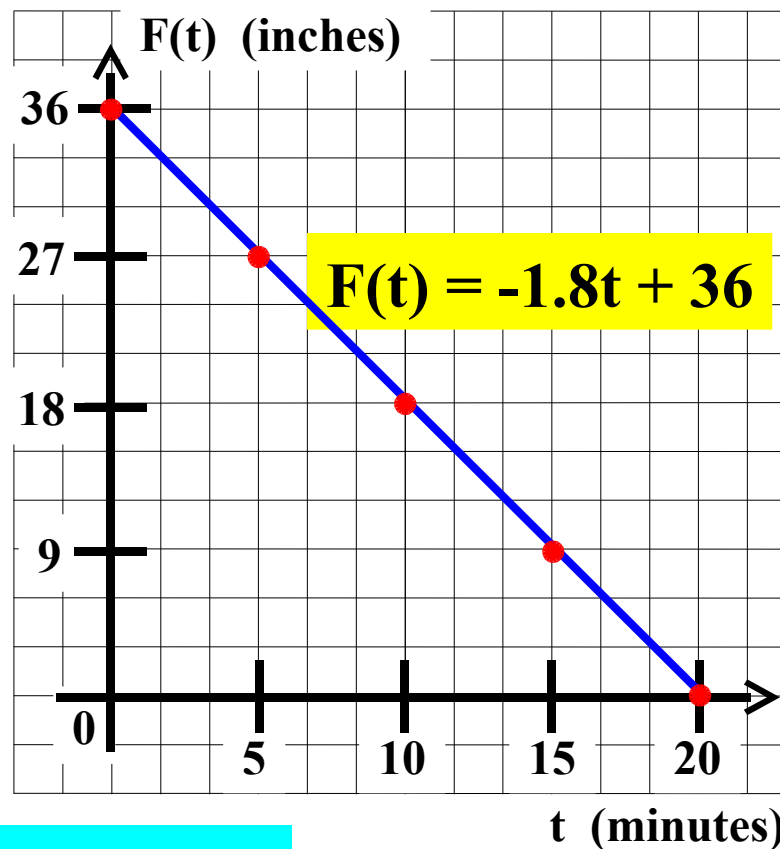Let F(t) represent the **depth of the water** in the tank (in **inches**).

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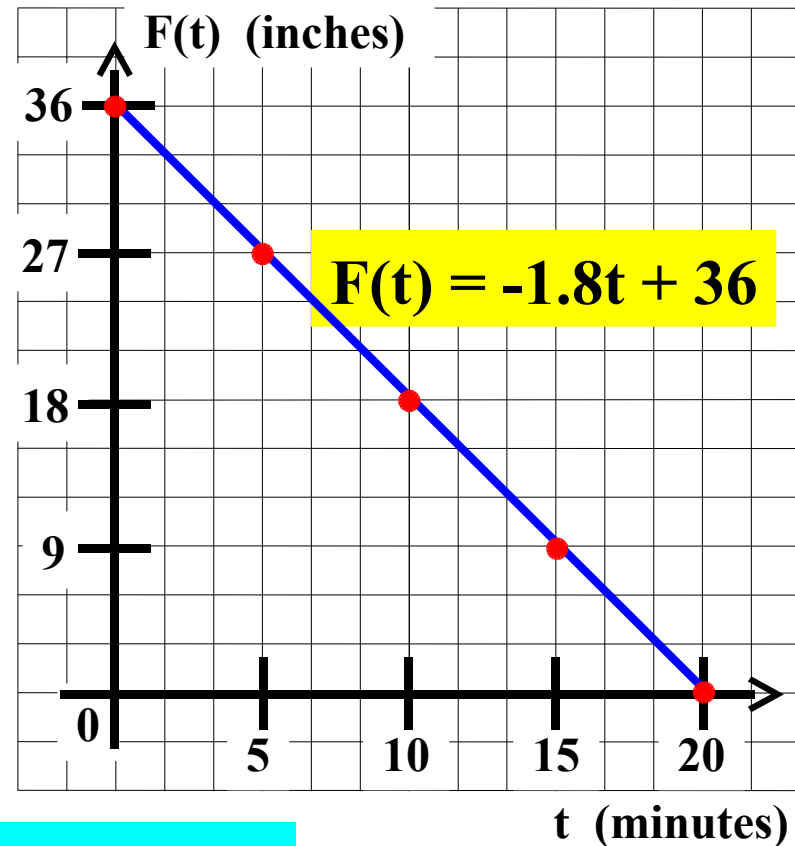Let F(t) represent the **depth of the water** in the tank (in **inches**).

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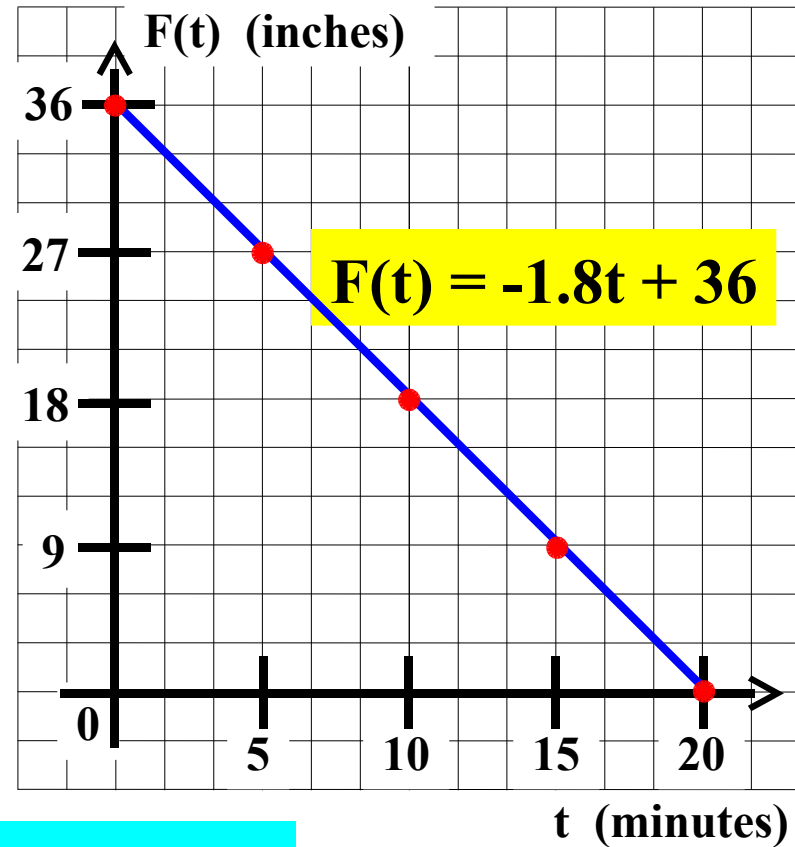**10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.**

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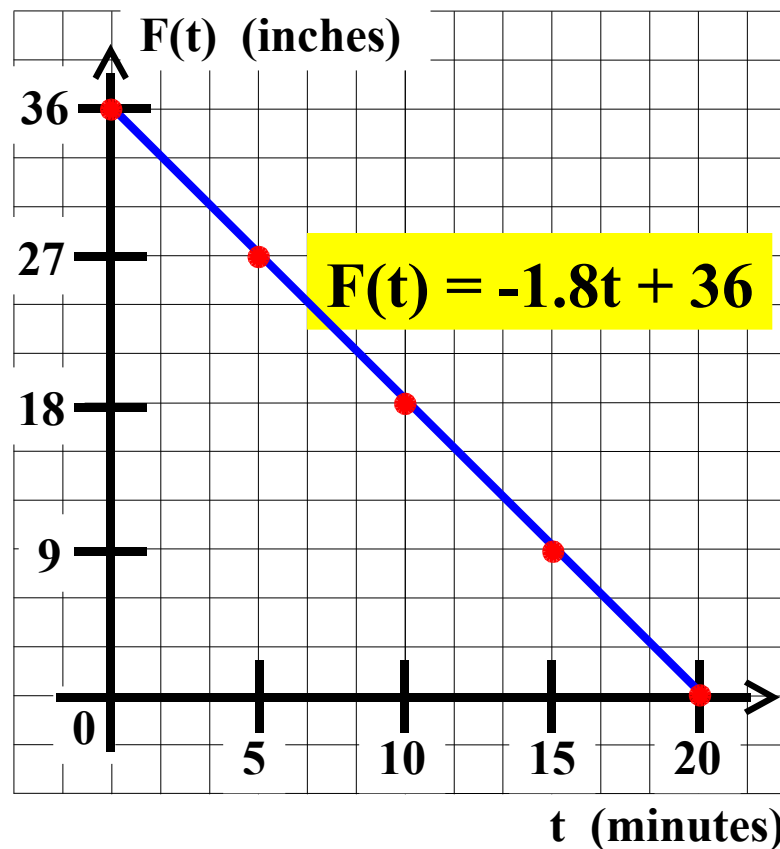**10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.**

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t (minutes)

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F(t) (inches)

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t (minutes)

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0	36
5	27
10	18
15	9
20	0

domain
[0, 20]

range
[0, 36]

15. Evaluate F(15).

F(15) = 9

F(t) (inches)

$F(t) = -1.8t + 36$

t (minutes)

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15. Evaluate F(15).

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t (minutes)

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domain

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[0, 36]

15. Evaluate F(15).

What does F(15) represent in
terms of the problem?

F(15) = 9

F(t) (inches)

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t (minutes)

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domain

[0, 20]

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[0, 36]

15. Evaluate F(15).

What does F(15) represent in terms of the problem?

$F(15) = 9$

F(15) represents

F(t) (inches)

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t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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0	36
5	27
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domain
[0, 20]
range
[0, 36]

15. Evaluate F(15).

What does F(15) represent in terms of the problem?

$$F(15) = 9$$

F(t) (inches)

36

27   F(t) = -1.8t + 36

18

9

0

5   10   15   20

t (minutes)

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

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

domain

[0, 20]

range

[0, 36]

15. Evaluate F(15).

What does F(15) represent in terms of the problem?

$F(15) = 9$

F(t) (inches)

36

27

18

9

0

5   10   15   20

$F(t) = -1.8t + 36$

t (minutes)

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

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10	18
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20	0

domain

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range

[0, 36]

15. Evaluate F(15).

What does F(15) represent in terms of the problem?

$F(15) = 9$ inches

F(t) (inches)

$F(t) = -1.8t + 36$

t (minutes)

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

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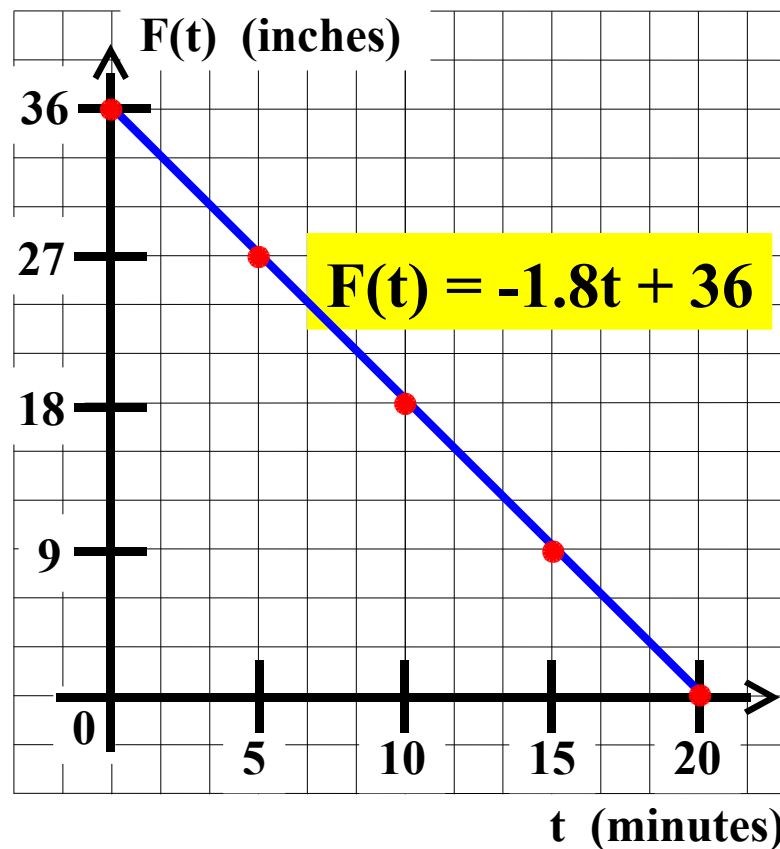**10. Make a table giving t and F(t) every 5 minutes from t = 0 until the tank is empty.**

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domain

[0, 20]

range

[0, 36]

16. If F(t) = 27, then find the value of t.

F(t) (inches)

36

27

$F(t) = -1.8t + 36$

18

9

0

5   10   15   20

t (minutes)

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domain

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range

[0, 36]

16. If F(t) = 27, then find the value of t.

F(t) (inches)

$F(t) = -1.8t + 36$

t (minutes)

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F(t) = 27 $\Longrightarrow$

F(t) (inches)

36

27

18

9

0

5   10   15   20

t (minutes)

$F(t) = -1.8t + 36$

Algebra II   Class Worksheet #5   Unit 3

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.

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

domain

[0, 20]

range

[0, 36]

F(t) (inches)

36

27

18

9

$F(t) = -1.8t + 36$

0

5   10   15   20

t (minutes)

16. If F(t) = 27, then find the value of t.

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

Algebra II   Class Worksheet #5   Unit 3

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.**

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

domain

[0, 20]

range

[0, 36]

**16. If F(t) = 27, then find
the value of t.**

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

F(t) (inches)

$$F(t) = -1.8t + 36$$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.

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

domain

[0, 20]

range

[0, 36]

16. If F(t) = 27, then find the value of t.

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

F(t) (inches)

$F(t) = -1.8t + 36$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.

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

domain

[0, 20]

range

[0, 36]

16. If F(t) = 27, then find the value of t.

What does this value of t represent in terms of the problem?

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

F(t) (inches)

$F(t) = -1.8t + 36$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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

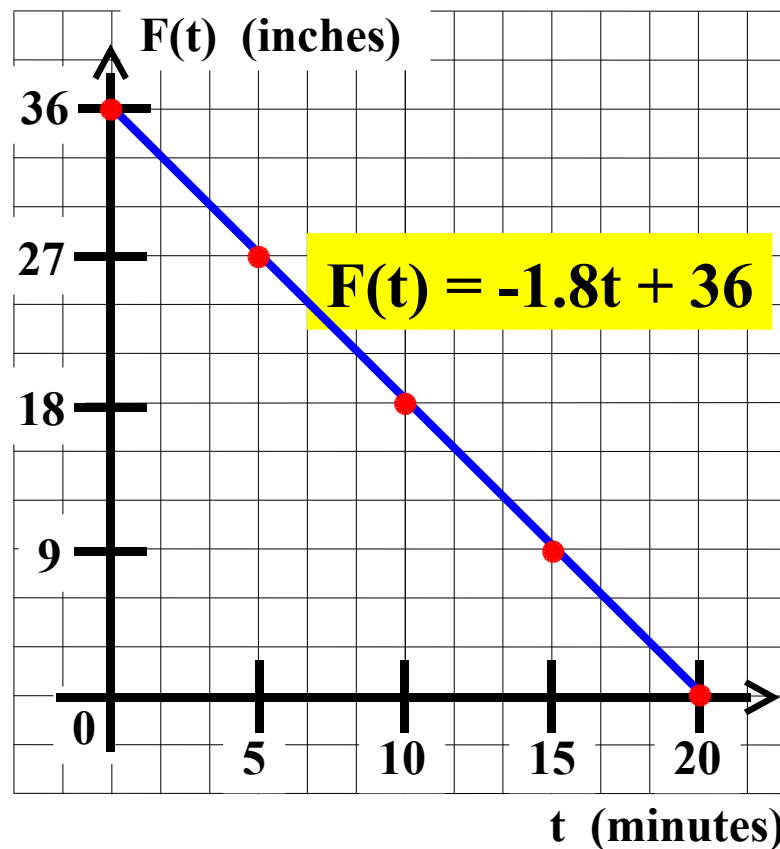| t	F(t)
0	36
5	27
10	18
15	9
20	0

[0, 20]

range

[0, 36]

**16. If F(t) = 27, then find
the value of t.**

What does this value of t
represent in terms of the
problem?

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

This represents the time

F(t) (inches)

$F(t) = -1.8t + 36$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.

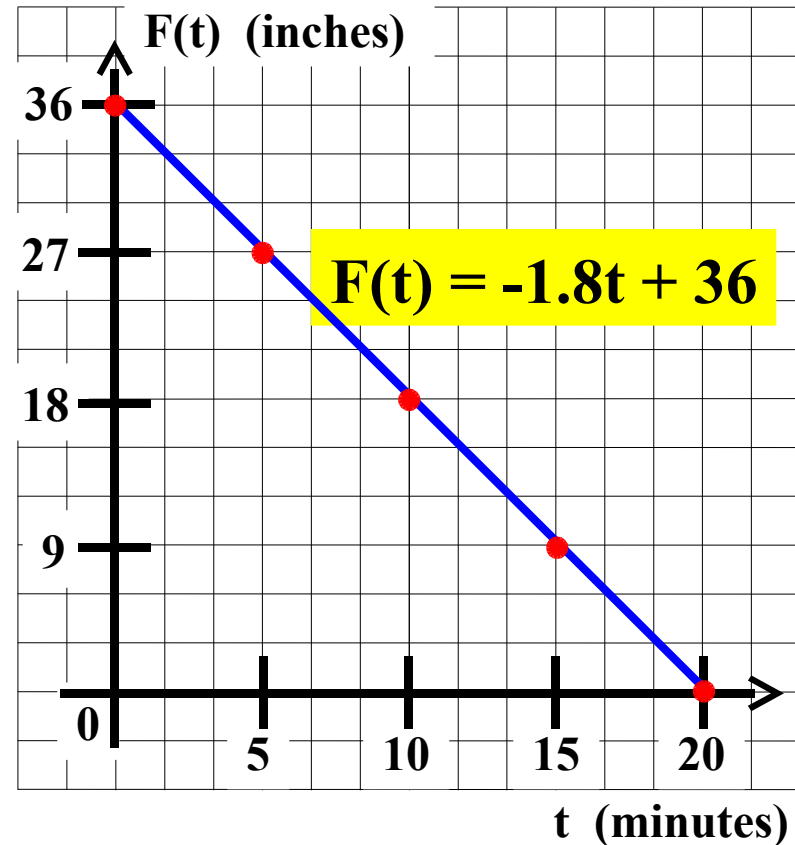| t	F(t)
0	36
5	27
10	18
15	9
20	0

domain

[0, 20]

range

[0, 36]

16. If F(t) = 27, then find the value of t.

What does this value of t represent in terms of the problem?

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

F(t) (inches)

$F(t) = -1.8t + 36$

t (minutes)

This represents <u>the time</u> it took for the water to be 27 inches deep.

Algebra II   Class Worksheet #5   Unit 3

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.

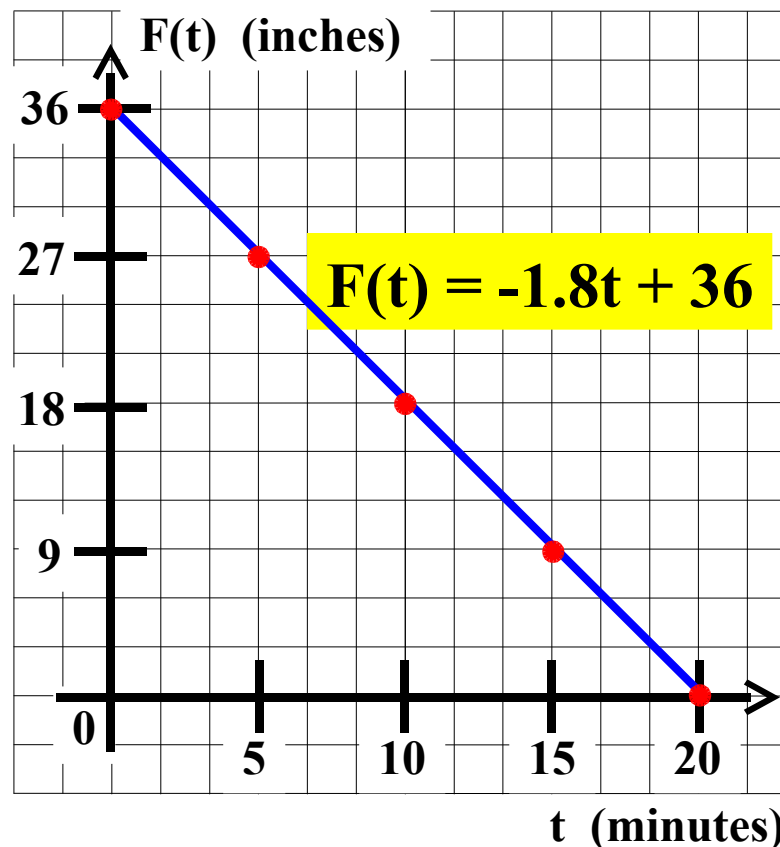| t	F(t)
0	36
5	27
10	18
15	9
20	0

domain
[0, 20]

range
[0, 36]

16. If F(t) = 27, then find the value of t. What does this value of t represent in terms of the problem?

F(t) (inches)

$F(t) = -1.8t + 36$

t (minutes)

$F(t) = 27 \implies t = 5$ **minutes**
This represents <u>the time</u> it took for the water to be 27 inches deep.

Algebra II   Class Worksheet #5   Unit 3

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? _____

Algebra II   Class Worksheet #5   Unit 3

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? _____

$$V = LWH$$

Algebra II   Class Worksheet #5   Unit 3

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? _____

$$V = LWH$$

$$V =$$

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? _____

$$V = LWH$$

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

Algebra II   Class Worksheet #5   Unit 3

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? _____

$$V = LWH$$

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

$$V =$$

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? _____

$$V = LWH$$

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

$$V = 120 \text{ cu. ft.}$$

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is <mark>half full</mark> 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? _____

$$V = LWH$$

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

$$V = 120 \text{ cu. ft.}$$

Algebra II   Class Worksheet #5   Unit 3

A rectangular water tank is 8 feet long, 5 feet wide, and 3 feet deep. The tank is <mark>half full</mark> 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.

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.

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 =

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? _____

$$V = LWH$$

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

$$V = 120 \text{ cu. ft.}$$

60 cubic feet must be added to fill the tank.

Time = 60 cu. ft. ÷ 2 cu. ft. per min.

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. ÷ 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? _____

$$V = LWH$$

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

$$V = 120 \text{ cu. ft.}$$

60 cubic feet must be added to fill the tank.

Time = 60 cu. ft. ÷ 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**

$$V = LWH$$

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

$$V = 120 \text{ cu. ft.}$$

60 cubic feet must be added to fill the tank.

Time = 60 cu. ft. ÷ 2 cu. ft. per min.

Time = 30 minutes

Algebra II   Class Worksheet #5   Unit 3

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.**

Algebra II   Class Worksheet #5   Unit 3

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)

Algebra II   Class Worksheet #5   Unit 3

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	

Algebra II   Class Worksheet #5   Unit 3

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	

Algebra II   Class Worksheet #5   Unit 3

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.

Algebra II   Class Worksheet #5   Unit 3

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.
The water is 18 inches deep.**

Algebra II   Class Worksheet #5   Unit 3

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.**

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.**

Algebra II   Class Worksheet #5   Unit 3

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.

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.

The water is 36 inches deep.

Algebra II   Class Worksheet #5   Unit 3

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

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.

Algebra II   Class Worksheet #5   Unit 3

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**).

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

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**).

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

The water depth increases 18 inches in 30 minutes.

Algebra II   Class Worksheet #5   Unit 3

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

The water depth increases 18 inches in 30 minutes.

It increases at 0.6 inches per minute.

Algebra II   Class Worksheet #5   Unit 3

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

**The water depth increases
18 inches in 30 minutes.**

**It increases at 0.6 inches
per minute.**

**It increases 3 inches
every 5 minutes.**

Algebra II   Class Worksheet #5   Unit 3

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**).
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0	18
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The water depth increases 18 inches in 30 minutes.

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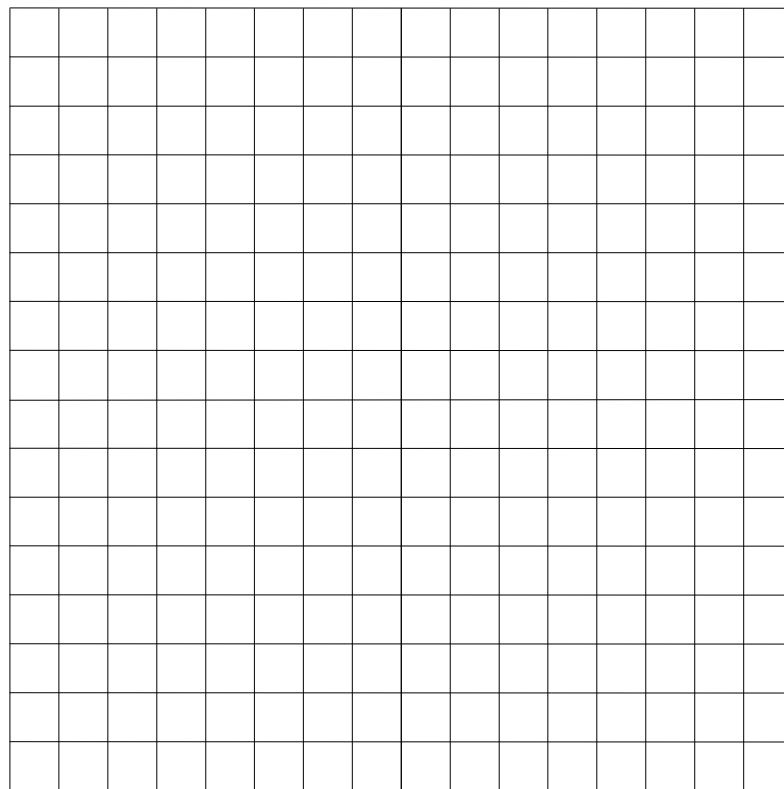Let t represent the time that water has been pumped into the tank (in **minutes**).
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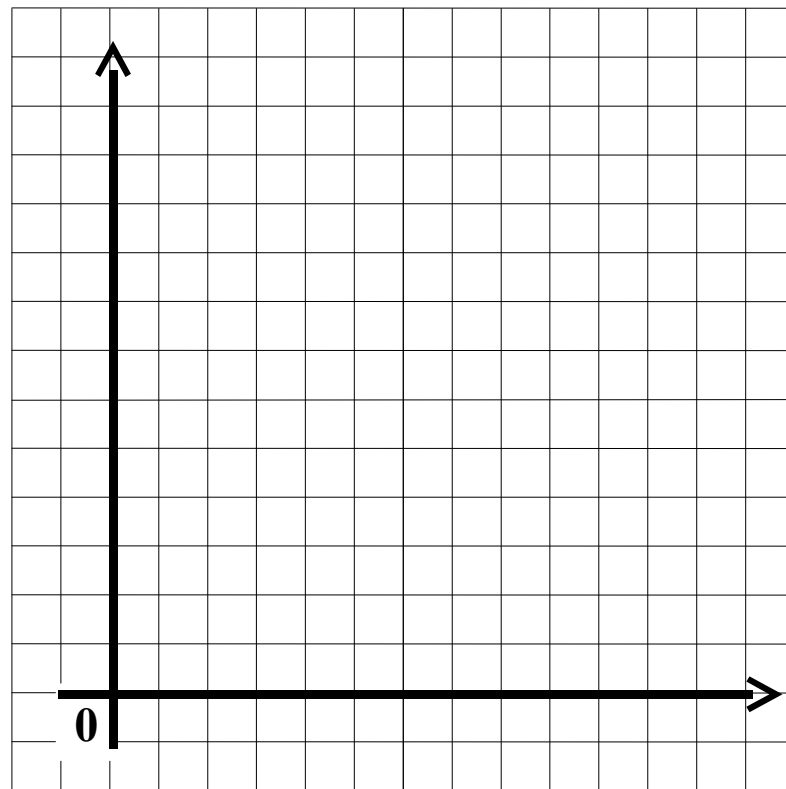Let t represent the time that water has been pumped into the tank (in **minutes**).
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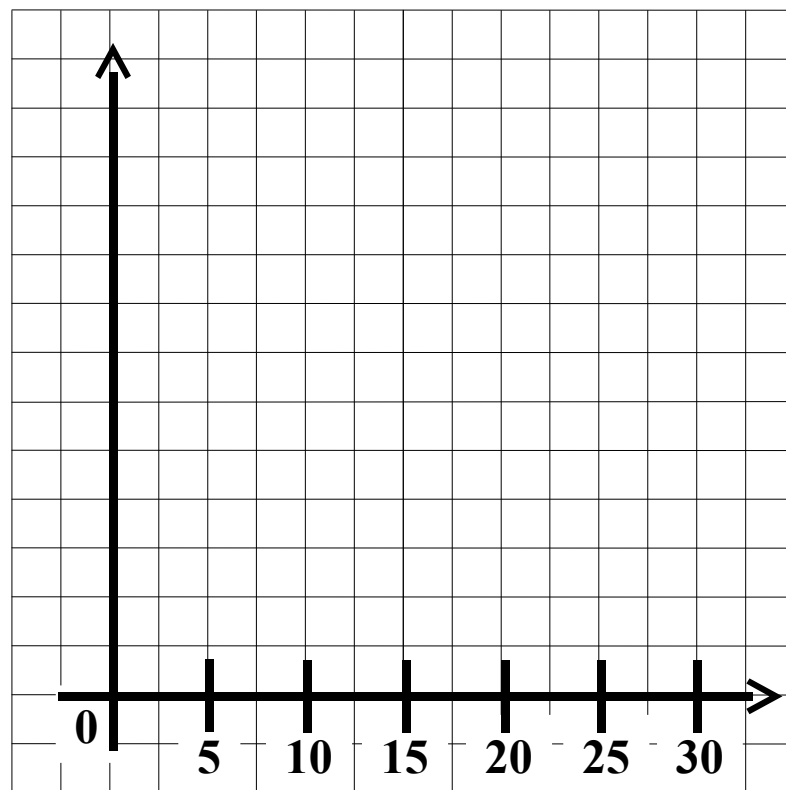Let t represent the time that water has been pumped into the tank (in **minutes**).
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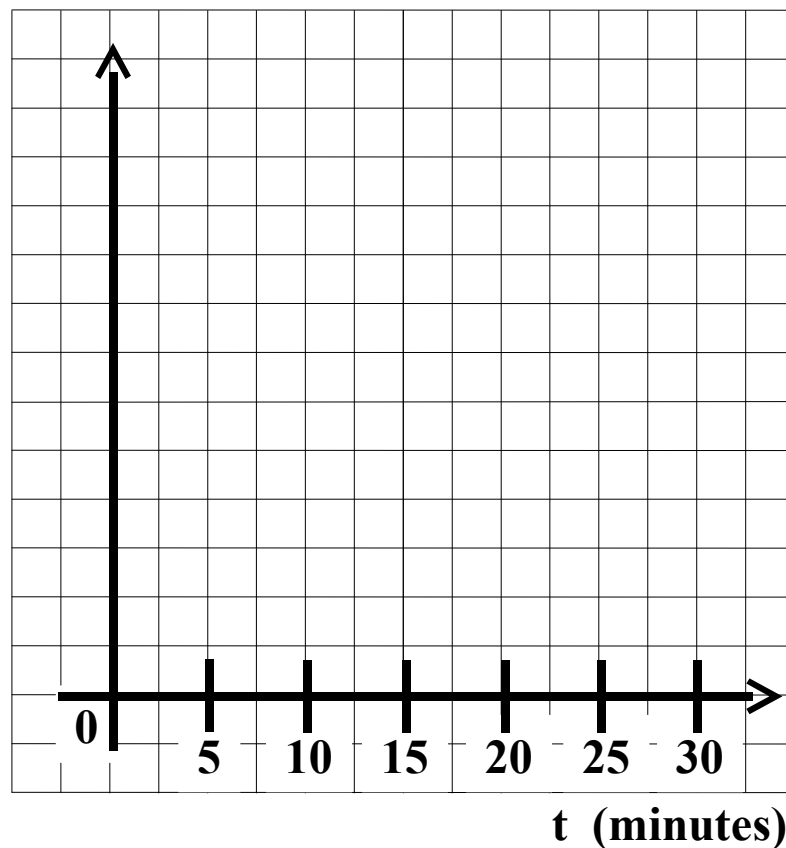Let t represent the time that water has been pumped into the tank (in **minutes**).
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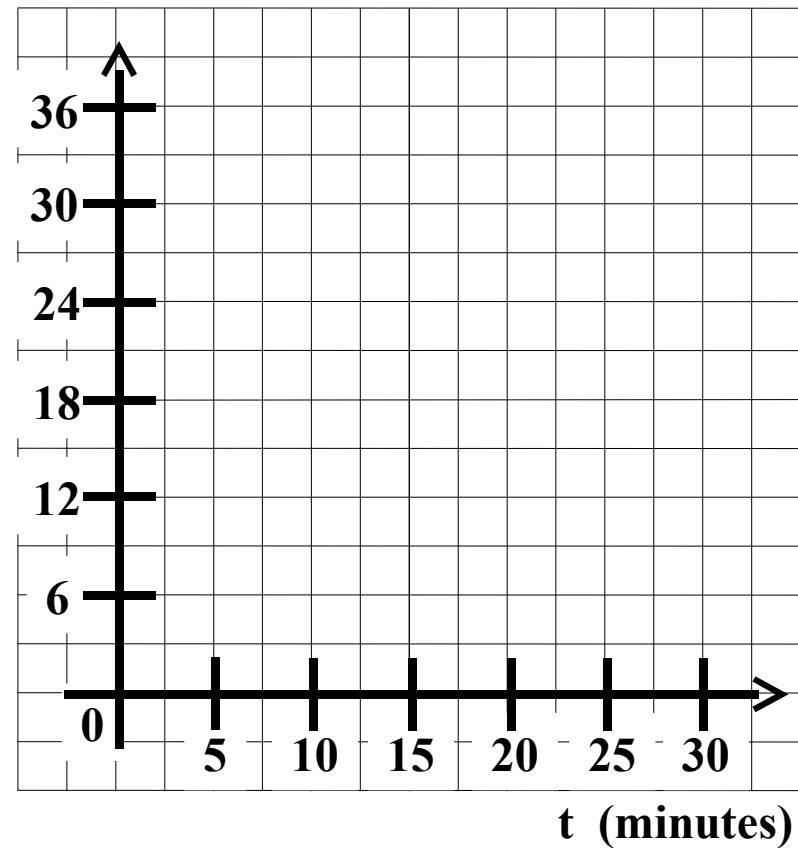Let F(t) represent the **depth of the water** in the tank (in **inches**).

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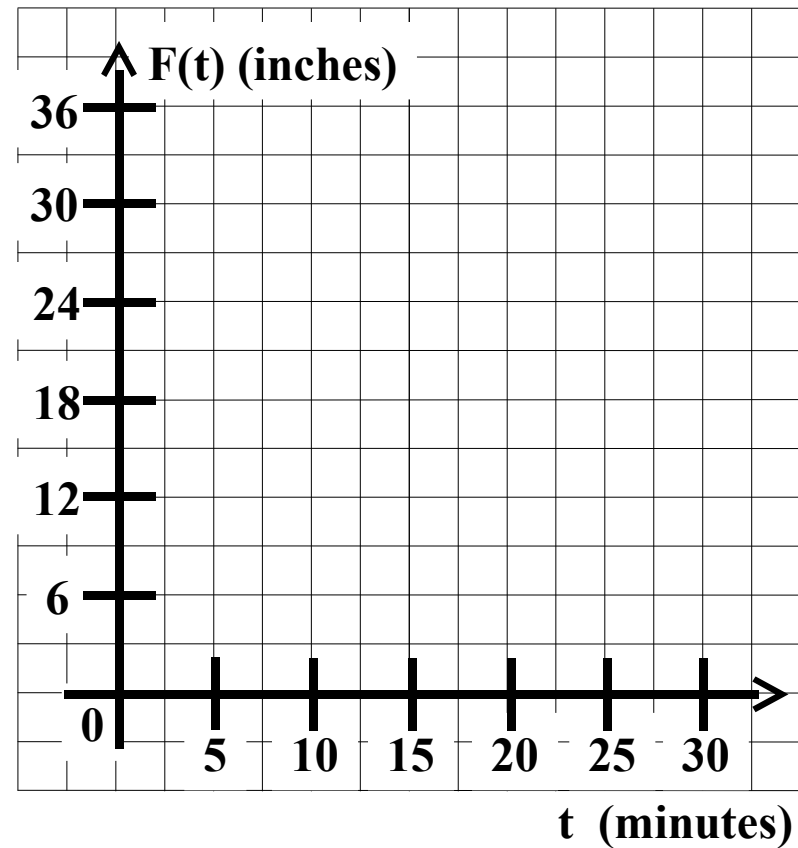Let t represent the time that water has been pumped into the tank (in **minutes**).
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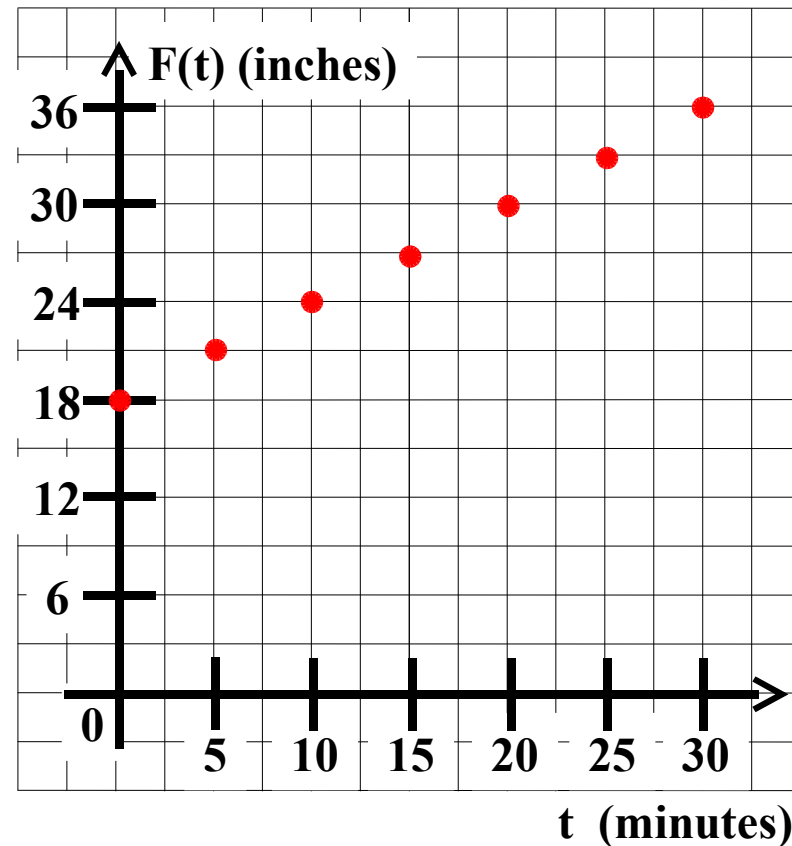Let t represent the time that water has been pumped into the tank (in **minutes**).
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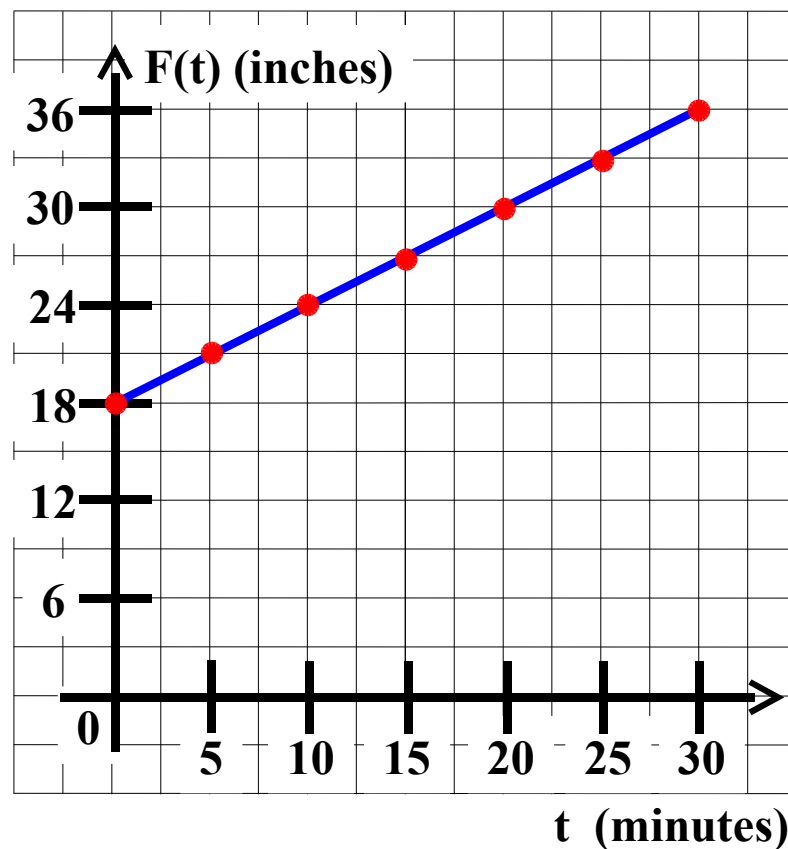Let t represent the time that water has been pumped into the tank (in **minutes**).
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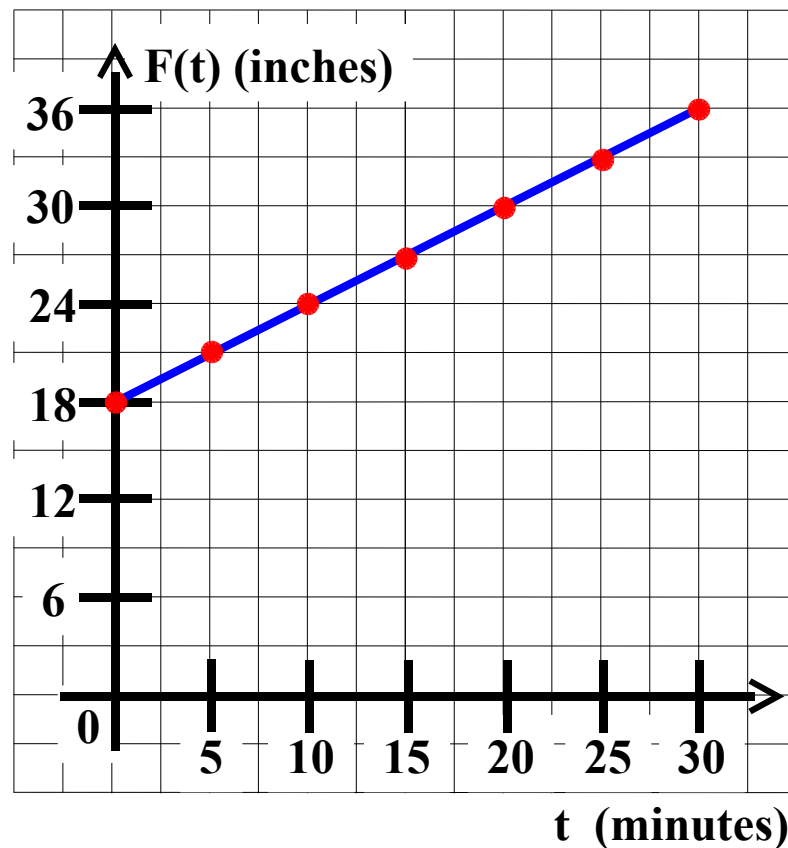Let t represent the time that water has been pumped into the tank (in **minutes**).
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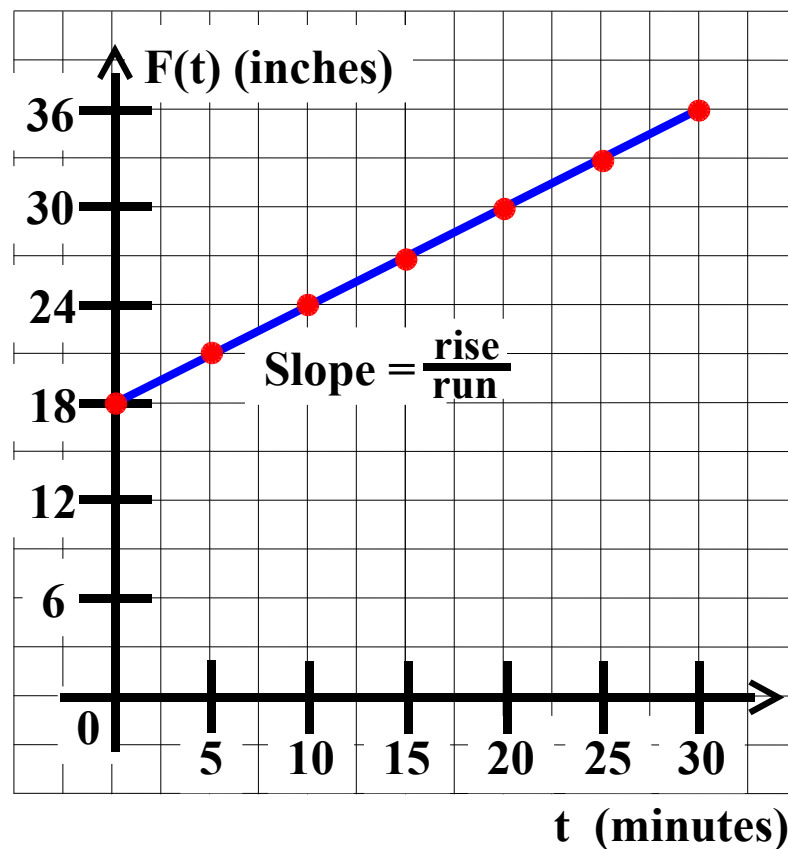Let t represent the time that water has been pumped into the tank (in **minutes**).
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F(t) (inches)

$$\text{Slope} = \frac{\text{rise}}{\text{run}}$$

t (minutes)

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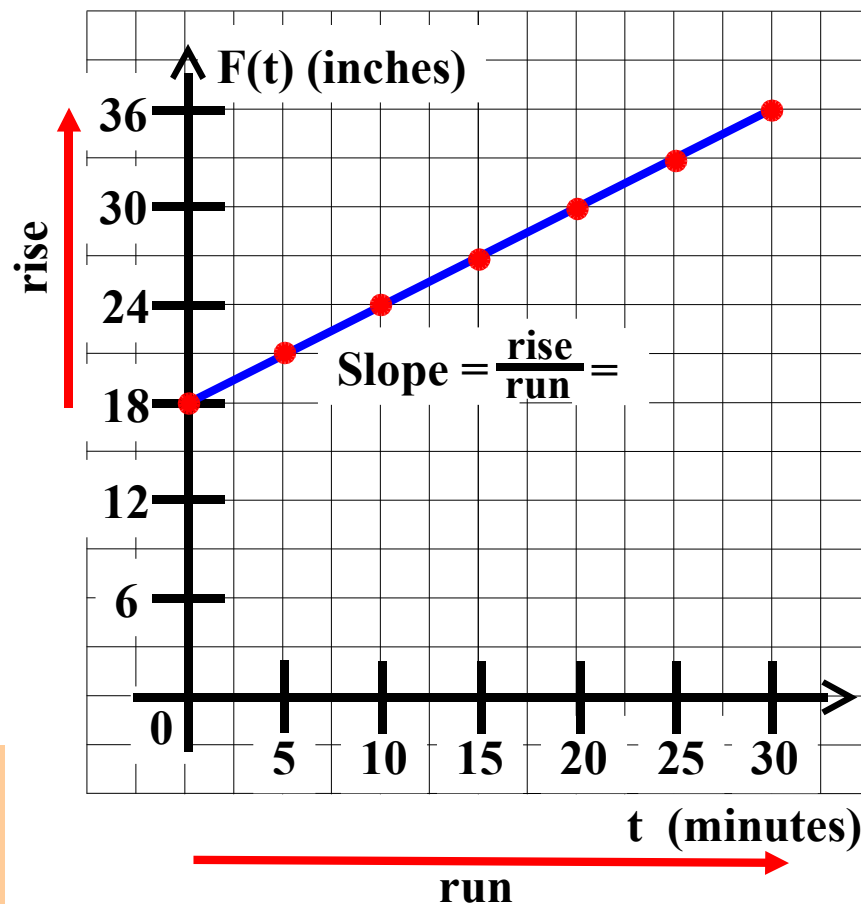Let F(t) represent the **depth of the water** in the tank (in **inches**).

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F(t) (inches)

rise

36

30

24

18

$\text{Slope} = \dfrac{\text{rise}}{\text{run}} =$

12

6

0

5   10   15   20   25   30

t (minutes)

run

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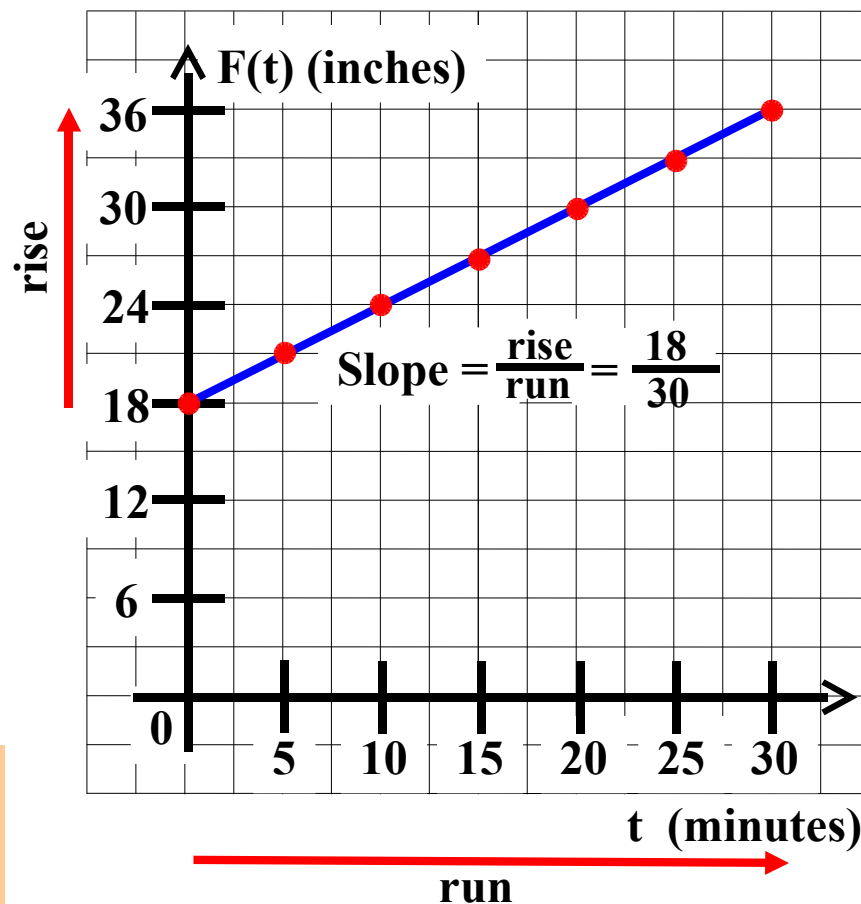Let F(t) represent the **depth of the water** in the tank (in **inches**).

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$$\text{Slope} = \frac{\text{rise}}{\text{run}} = \frac{18}{30}$$

run

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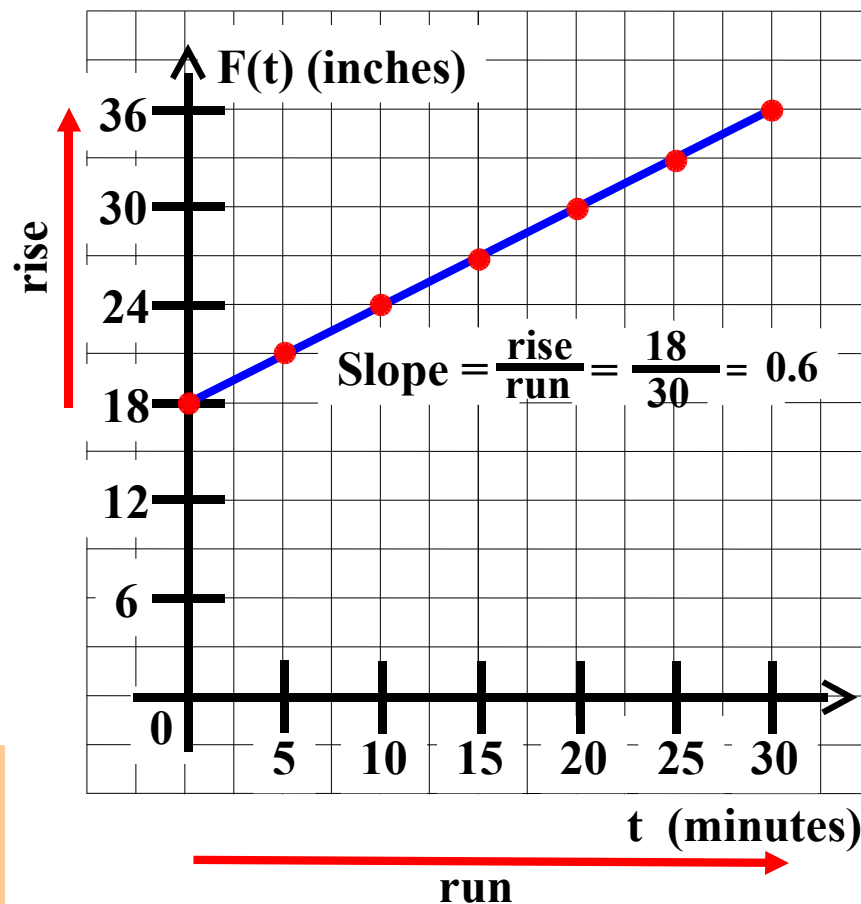Let F(t) represent the **depth of the water** in the tank (in **inches**).

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rise

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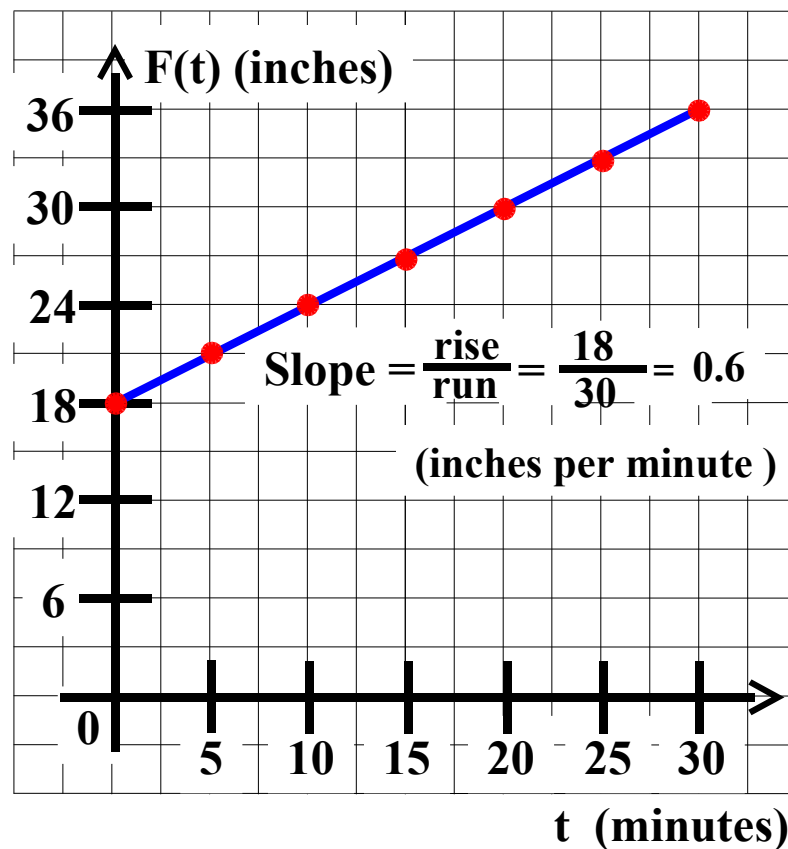Let t represent the time that water has been pumped into the tank (in **minutes**).
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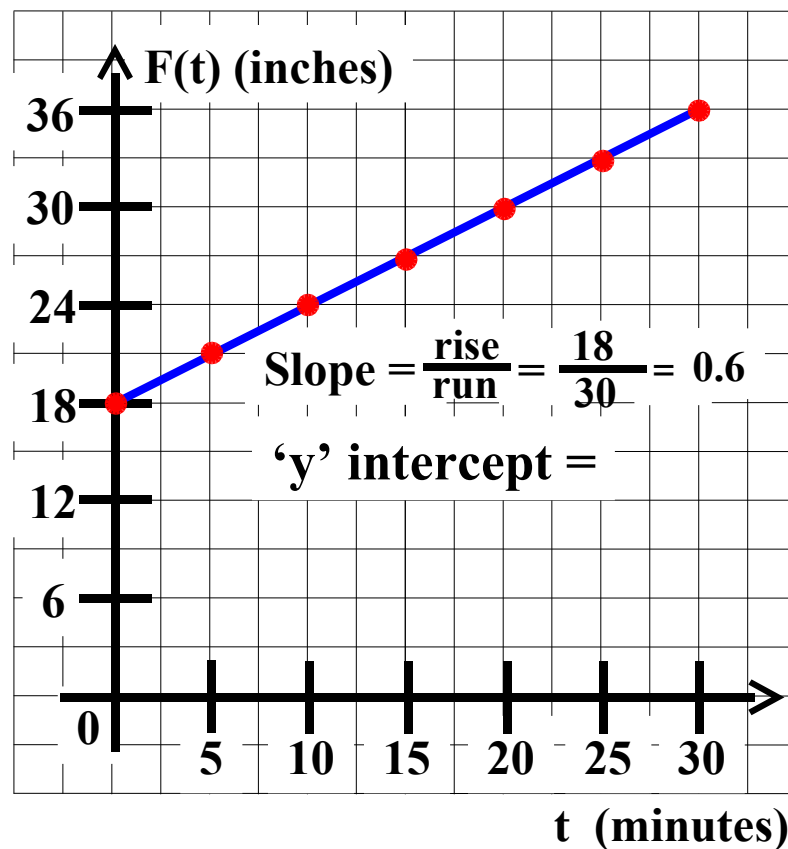Let t represent the time that water has been pumped into the tank (in **minutes**).
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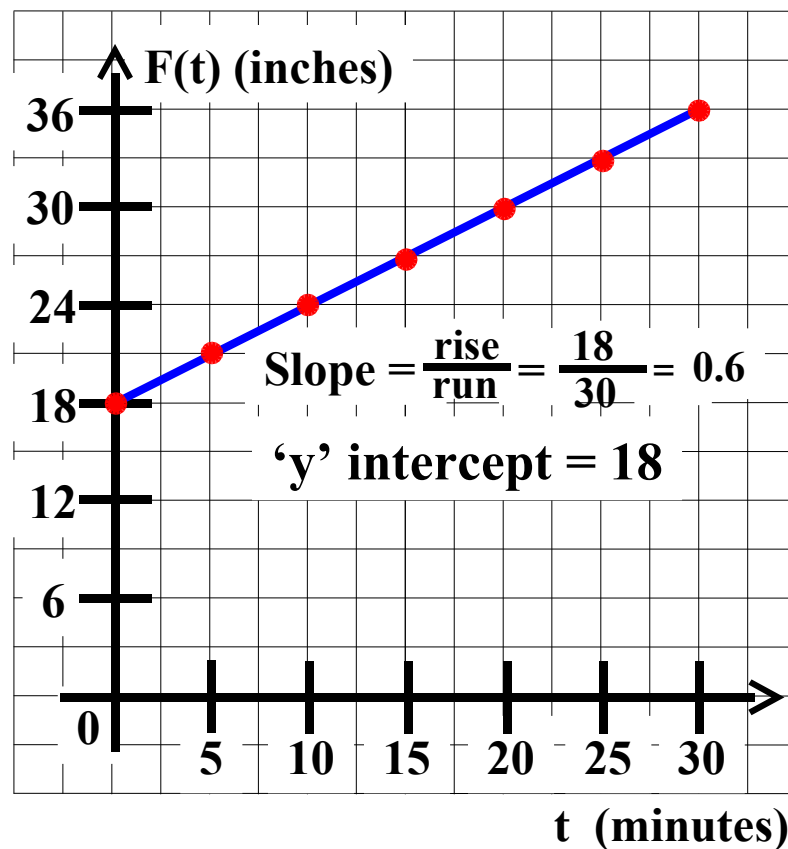Let t represent the time that water has been pumped into the tank (in **minutes**).
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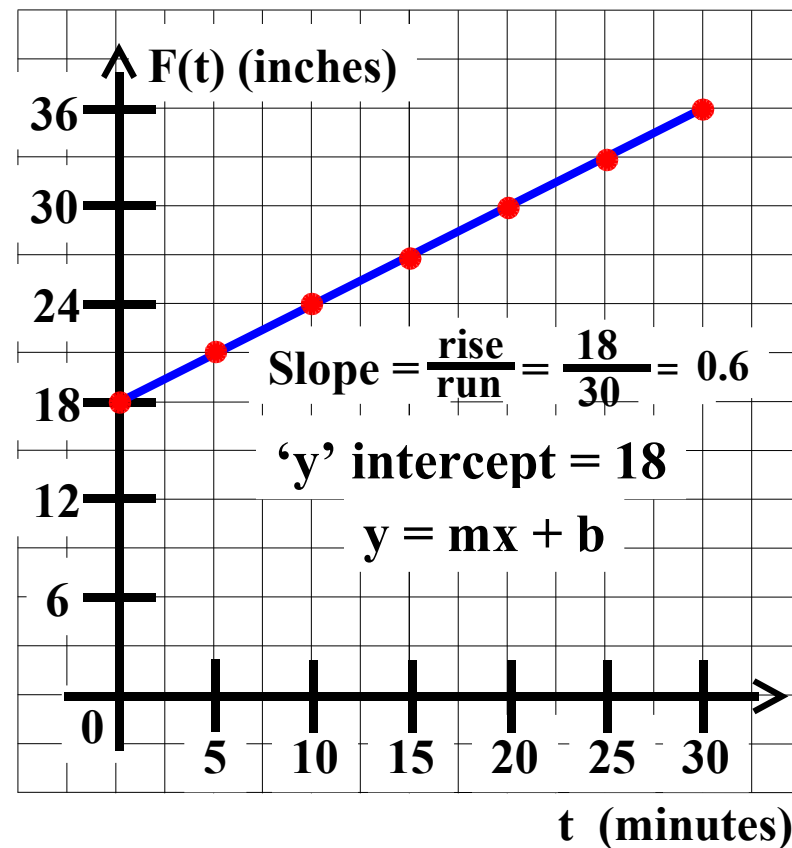Let t represent the time that water has been pumped into the tank (in **minutes**).
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$$y = mx + b$$

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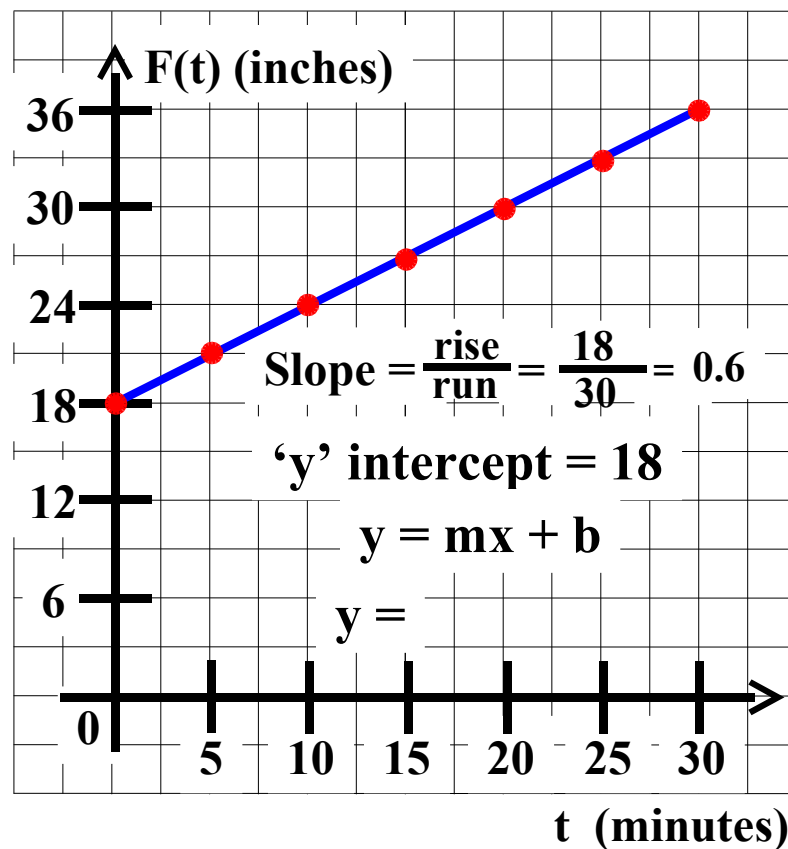Let t represent the time that water has been pumped into the tank (in **minutes**).
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**20.   Write an equation giving F(t) in
terms of t.**

$F(t)$ (inches)

$$\text{Slope} = \frac{\text{rise}}{\text{run}} = \frac{18}{30} = 0.6$$

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$$y = mx + b$$

$$y =$$

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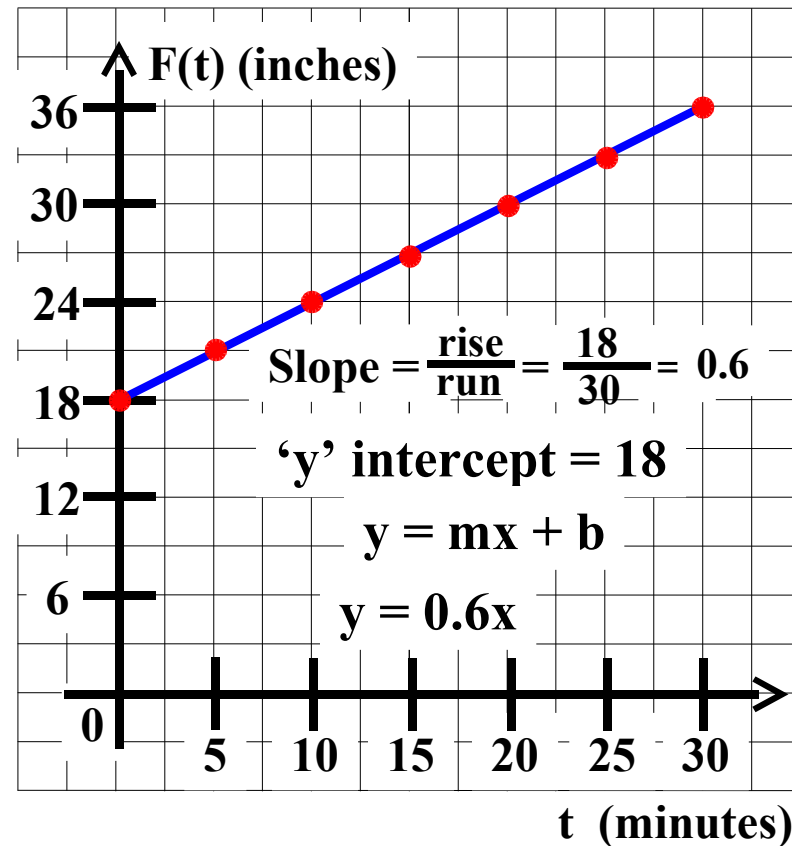Let t represent the time that water has been pumped into the tank (in **minutes**).
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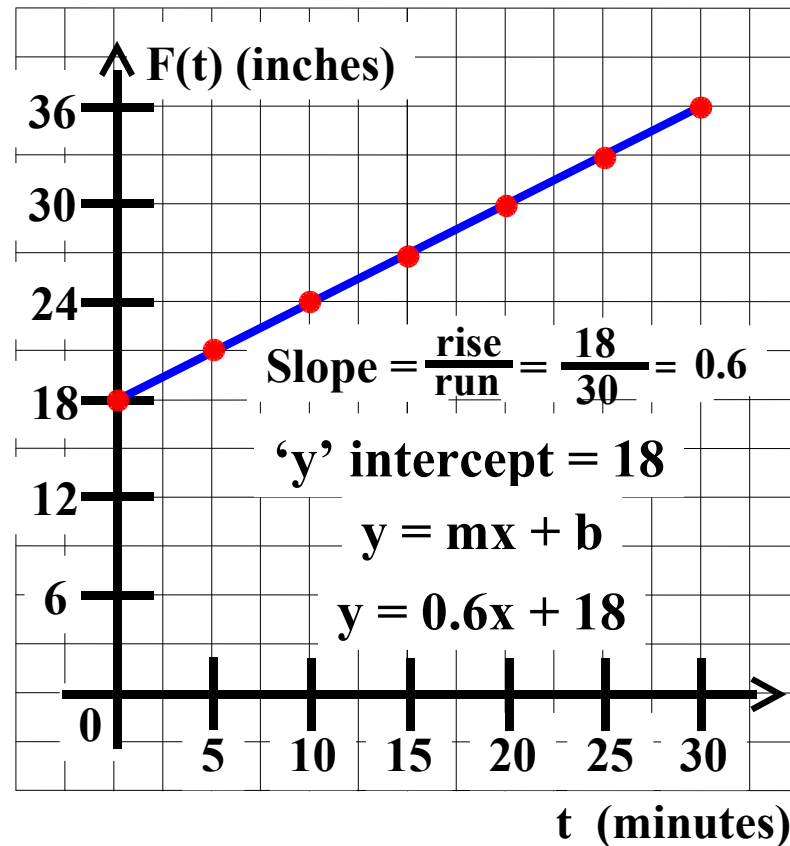Let t represent the time that water has been pumped into the tank (in **minutes**).
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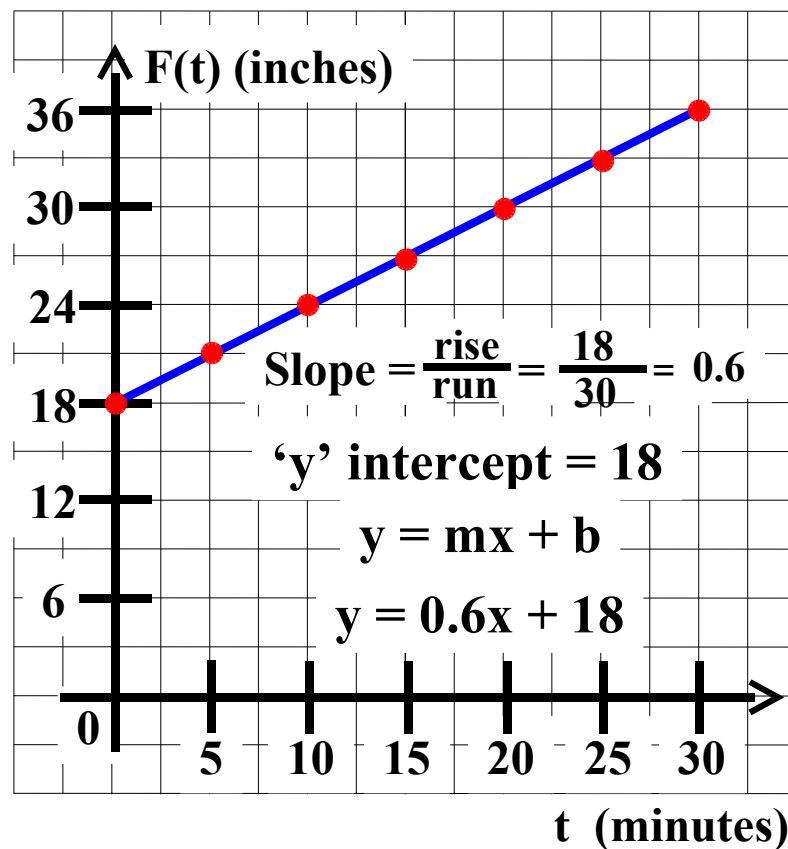Let F(t) represent the **depth of the water** in the tank (in **inches**).

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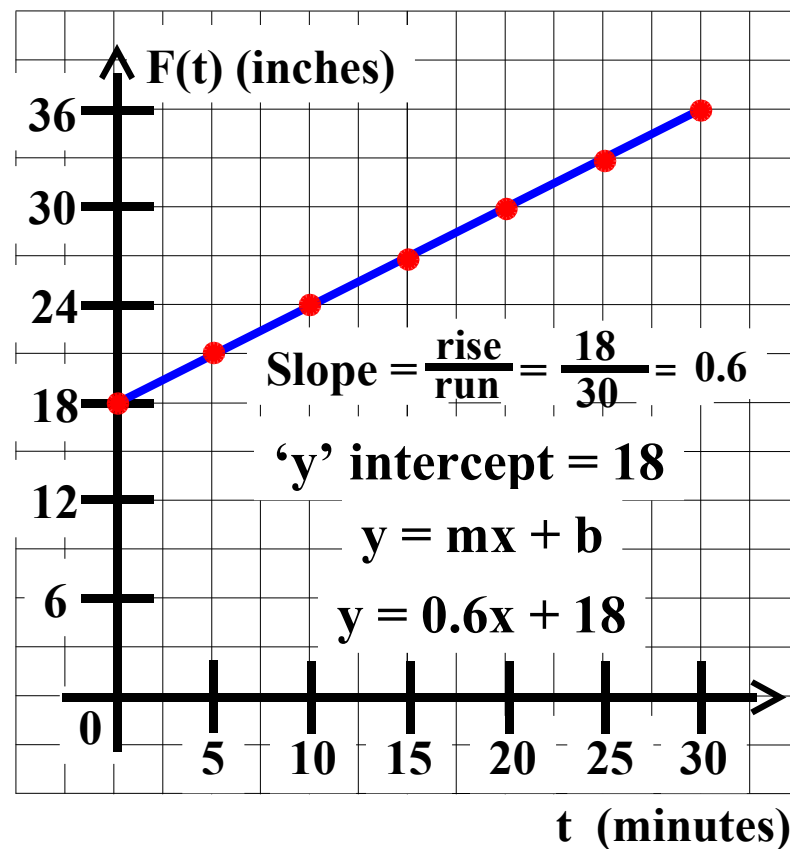Let F(t) represent the **depth of the water** in the tank (in **inches**).

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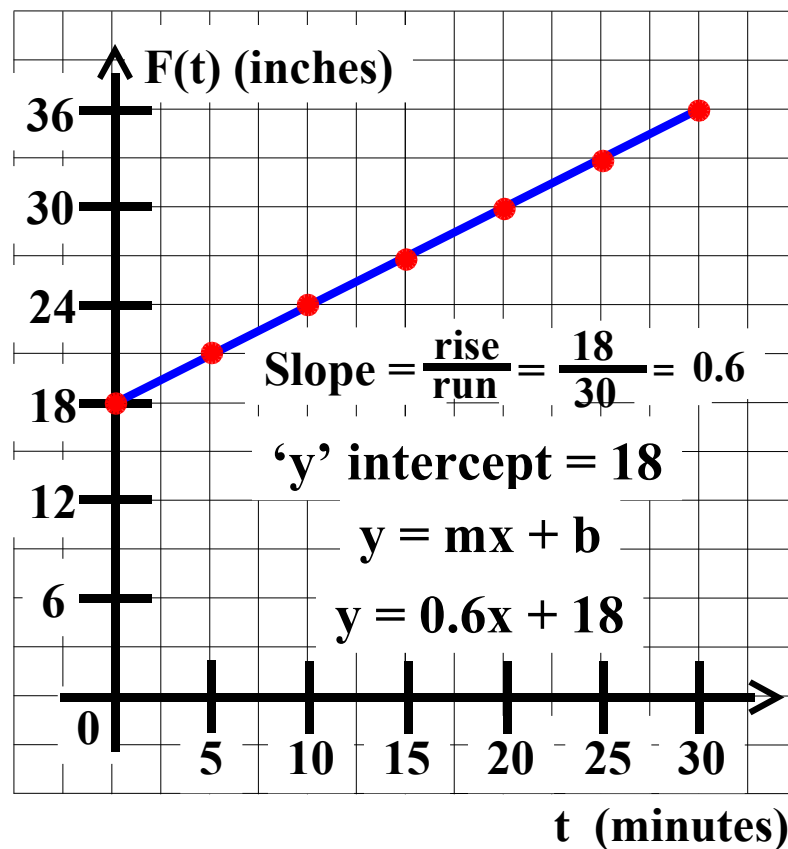Let F(t) represent the **depth of the water** in the tank (in **inches**).

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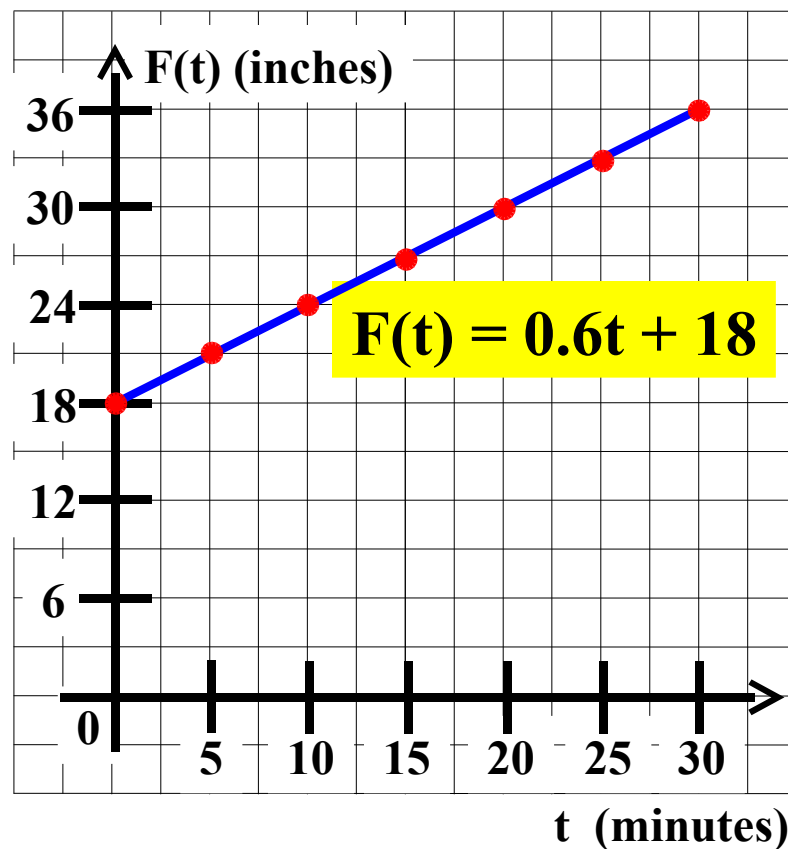Let t represent the time that water has been pumped into the tank (in **minutes**).
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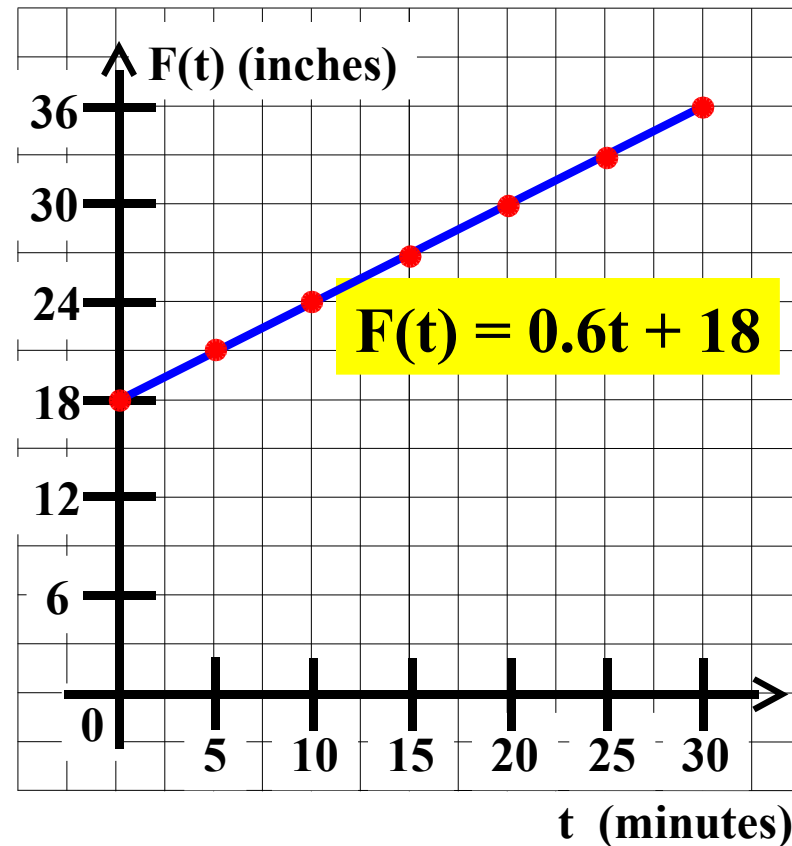Let t represent the time that water has been pumped into the tank (in **minutes**).
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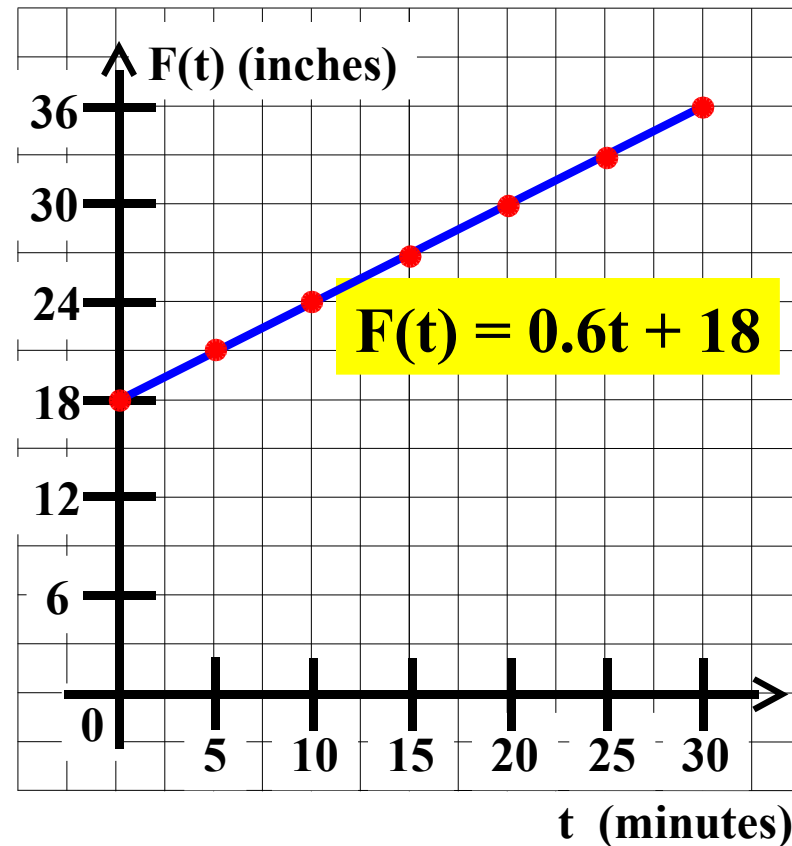Let t represent the time that water has been pumped into the tank (in **minutes**).
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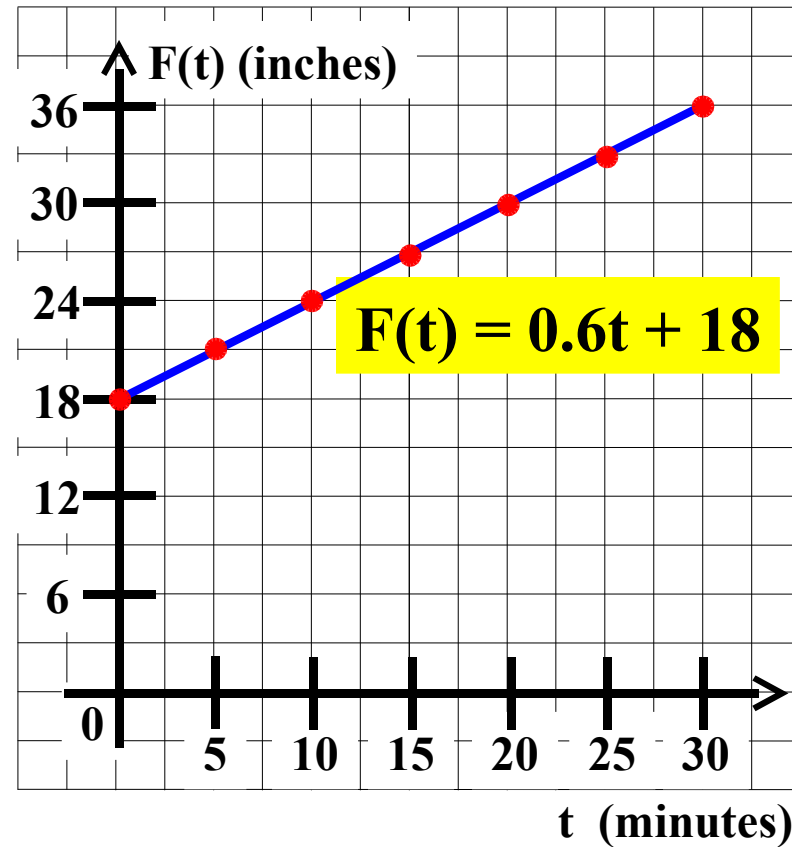Let t represent the time that water has been pumped into the tank (in **minutes**).
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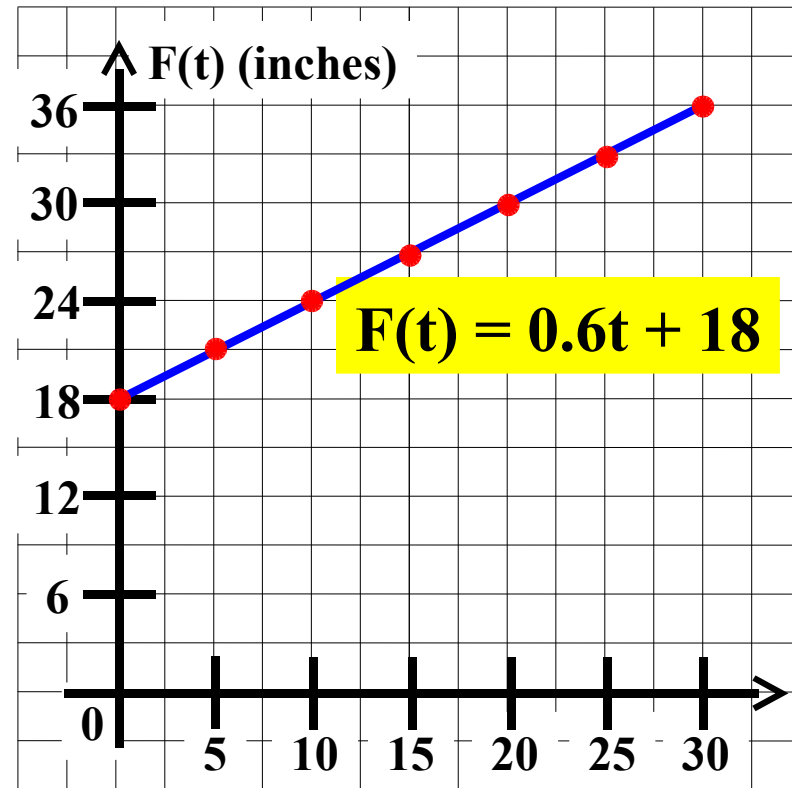Let F(t) represent the **depth of the water** in the tank (in **inches**).

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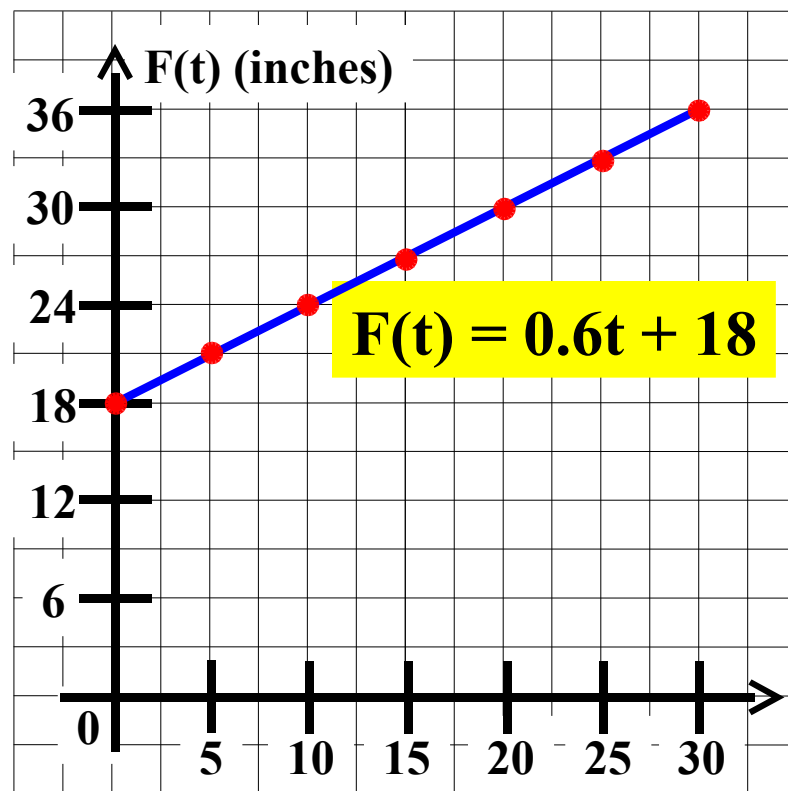Let t represent the time that water has been pumped into the tank (in **minutes**).
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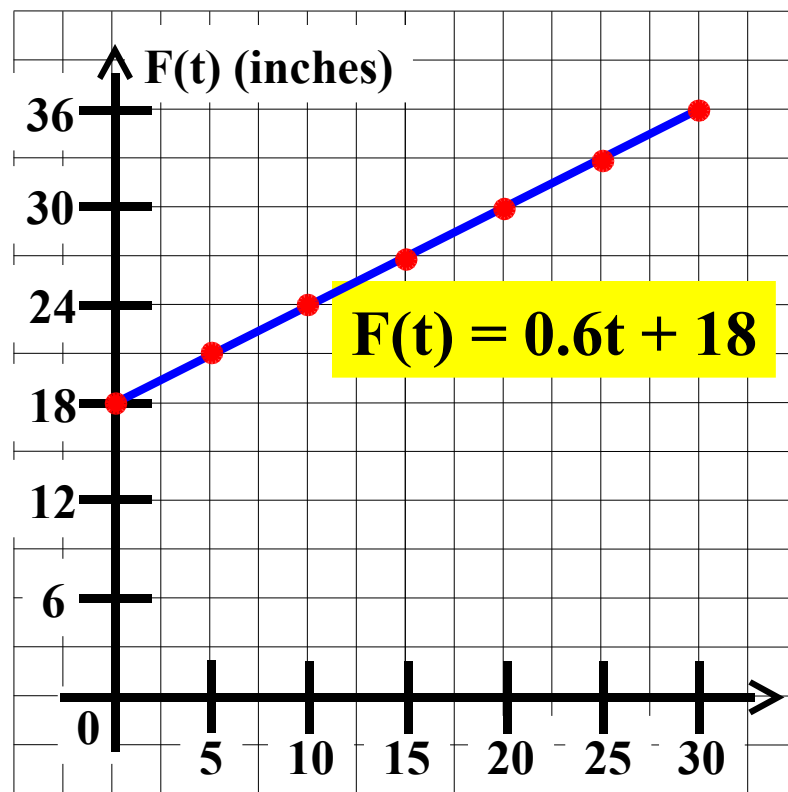Let t represent the time that water has been pumped into the tank (in **minutes**).
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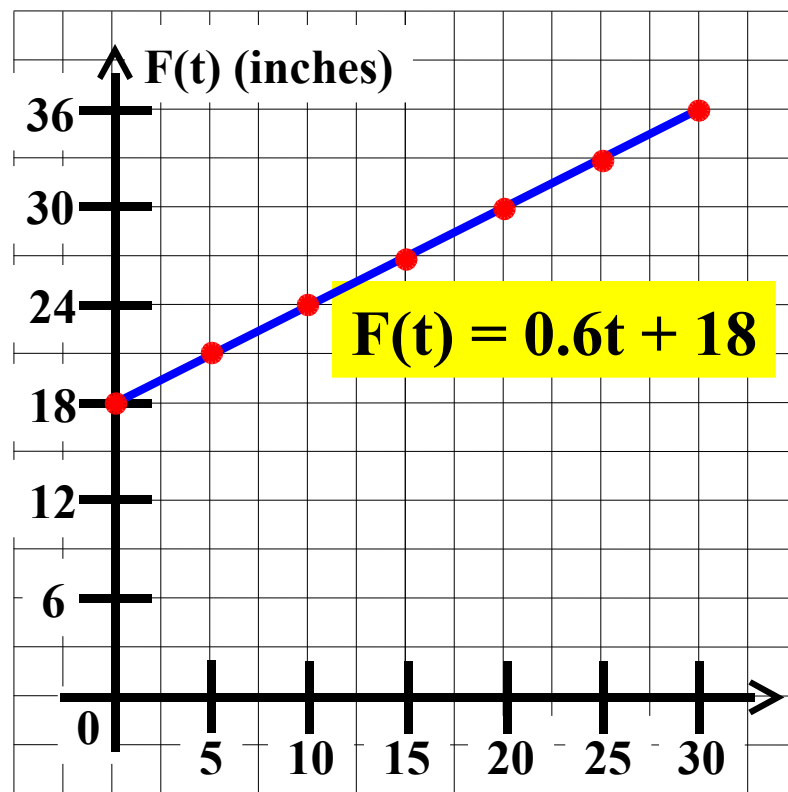Let F(t) represent the **depth of the water** in the tank (in **inches**).

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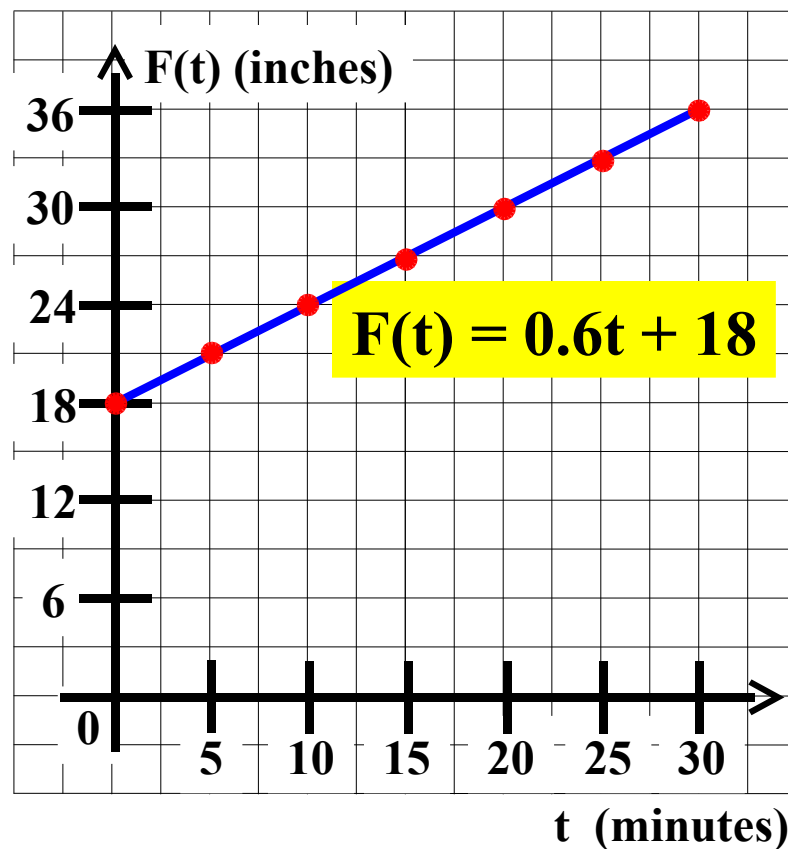Let F(t) represent the **depth of the water** in the tank (in **inches**).

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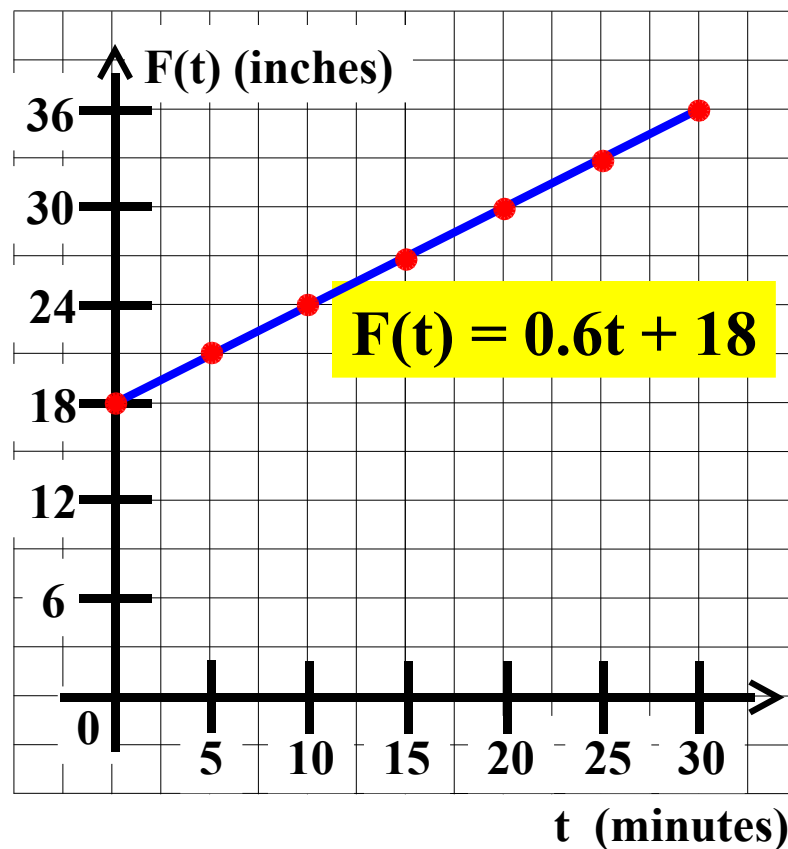Let F(t) represent the **depth of the water** in the tank (in **inches**).

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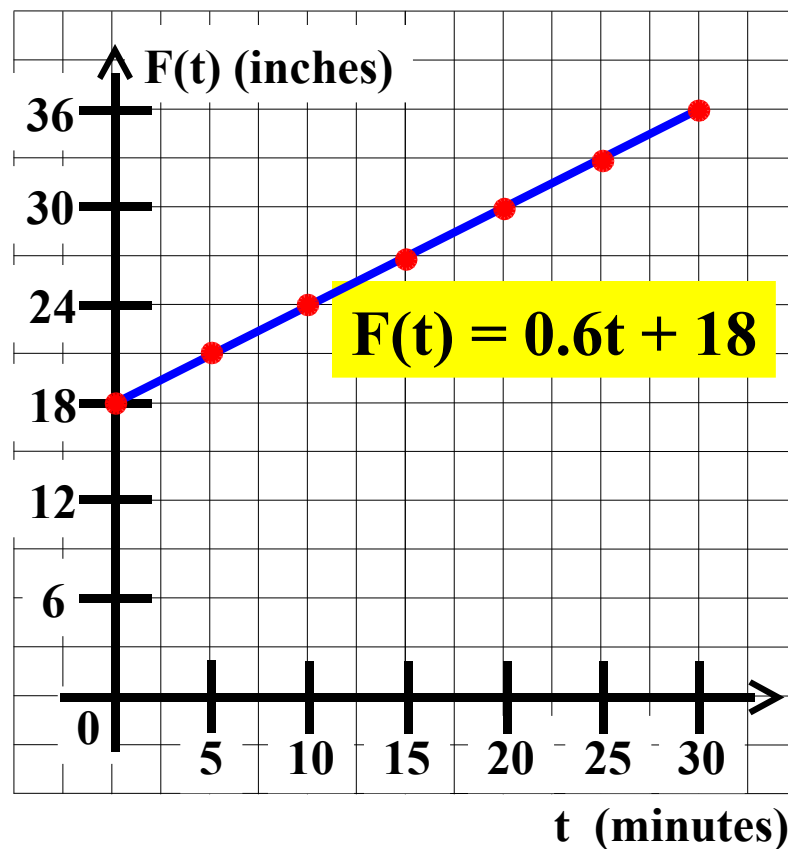Let F(t) represent the **depth of the water** in the tank (in **inches**).

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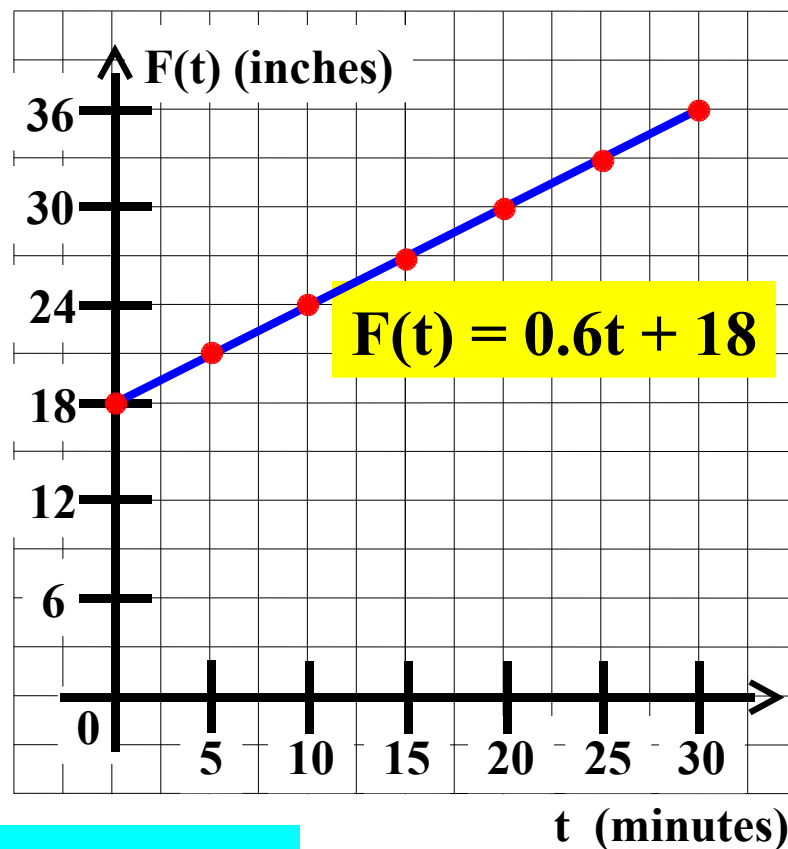17. How long will it take to fill the tank? **30 minutes**

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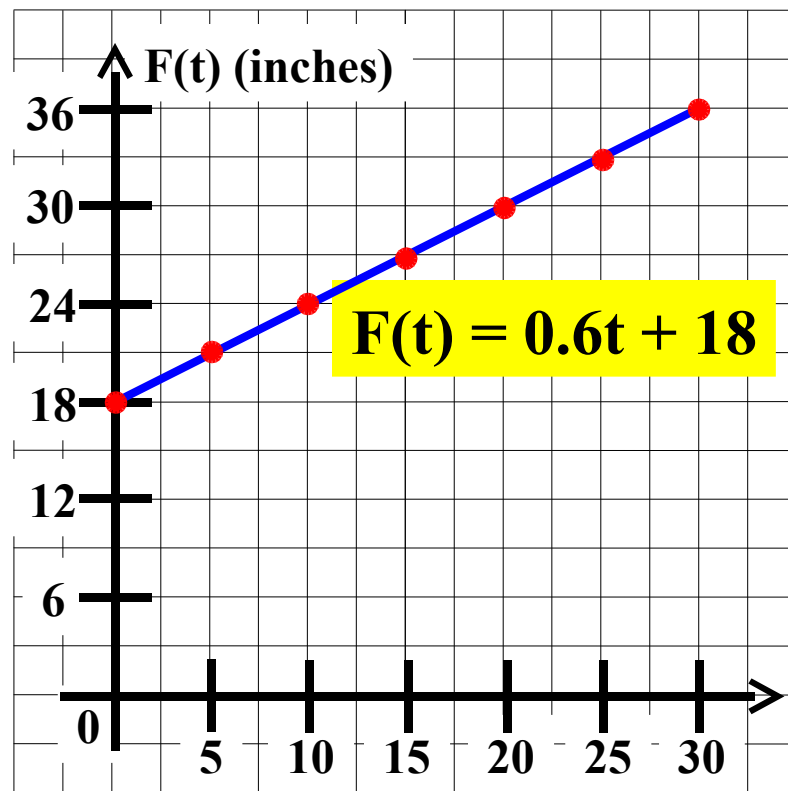Let F(t) represent the **depth of the water** in the tank (in **inches**).

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36

30

24

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18

12

6

0

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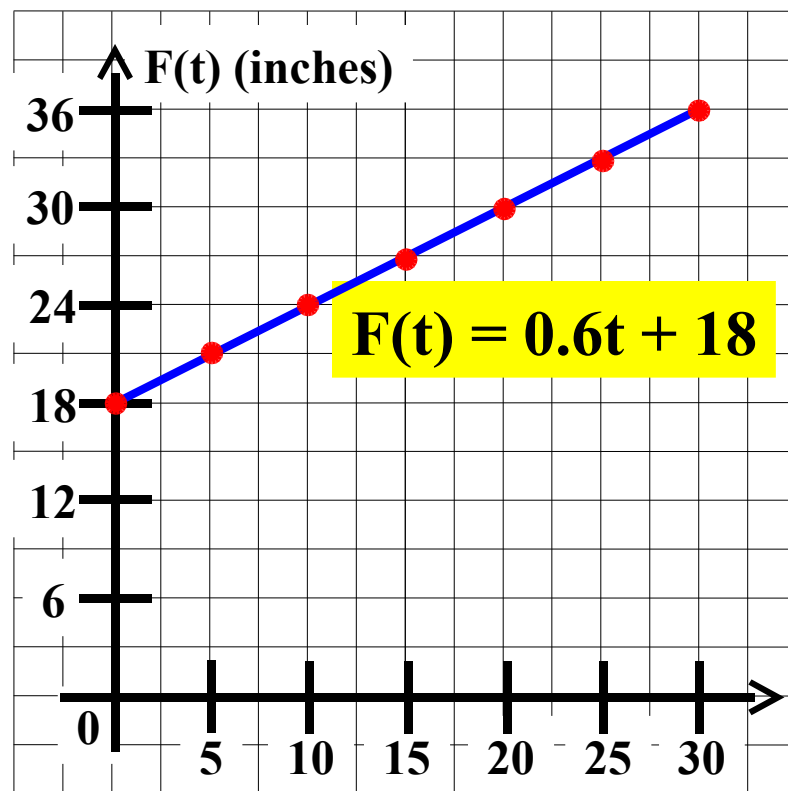Let F(t) represent the **depth of the water** in the tank (in **inches**).

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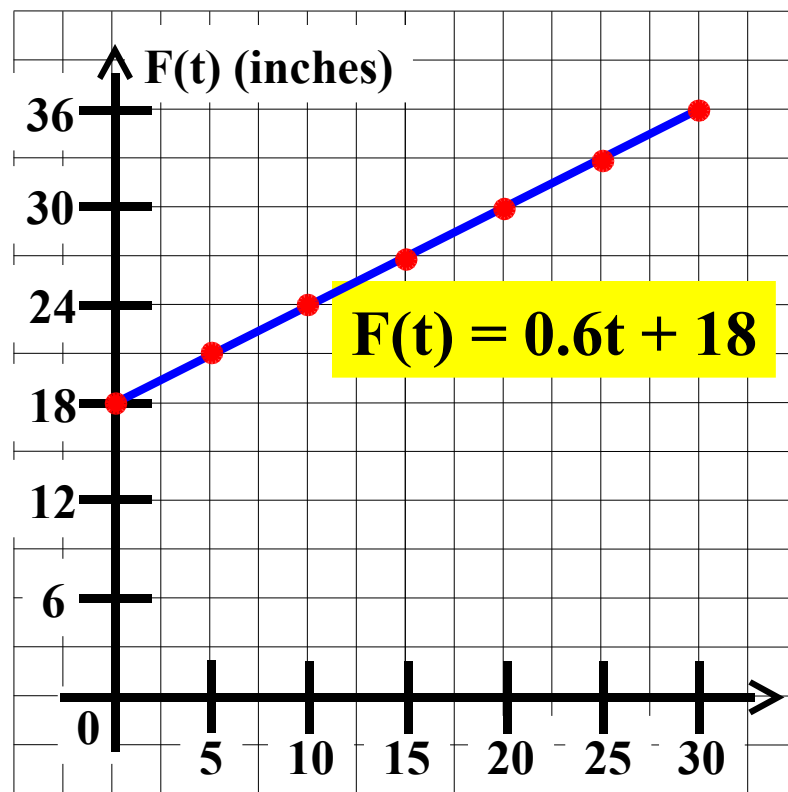Let F(t) represent the **depth of the water** in the tank (in **inches**).

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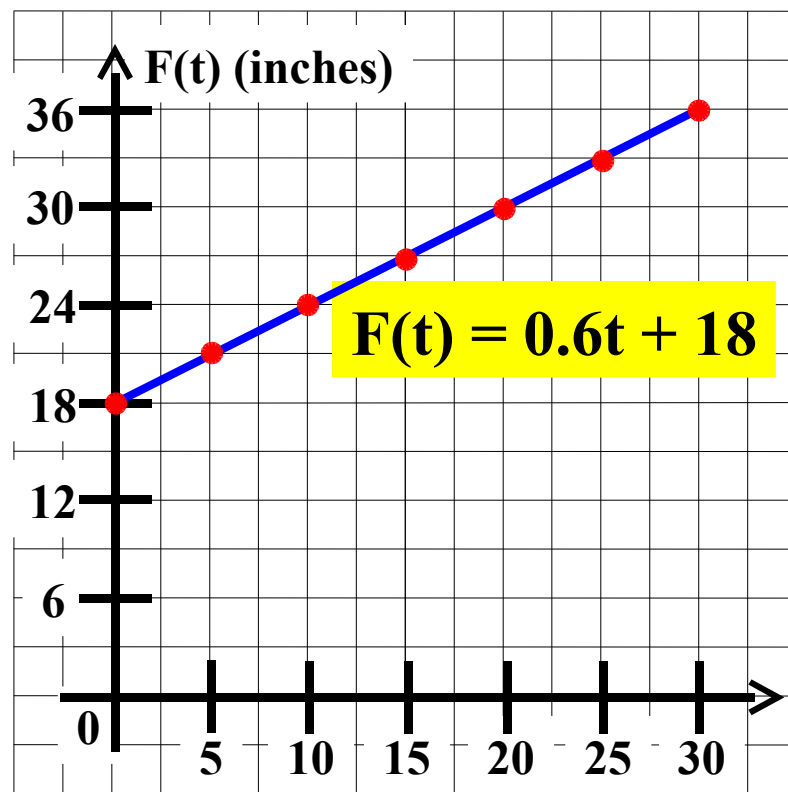
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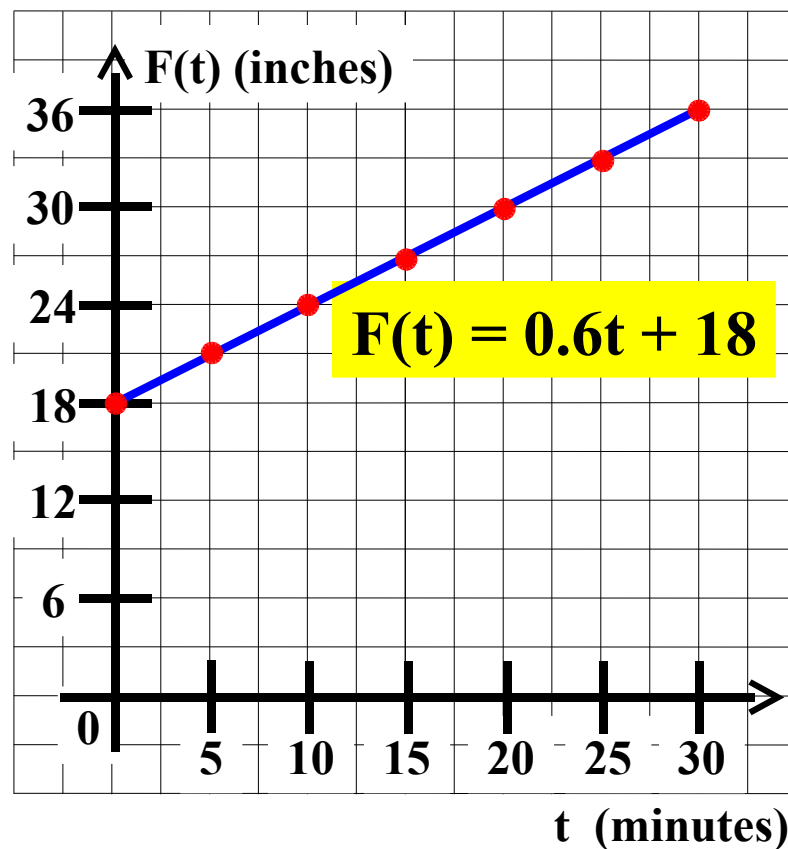every 5 minutes from t = 0 until
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Algebra II   Class Worksheet #5   Unit 3

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**

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]

23. **Evaluate F(10).**

F(t) (inches)

$$F(t) = 0.6t + 18$$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.
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5	21
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23. Evaluate F(10).

$F(t) = 0.6t + 18$

F(t) (inches)

Algebra II   Class Worksheet #5   Unit 3

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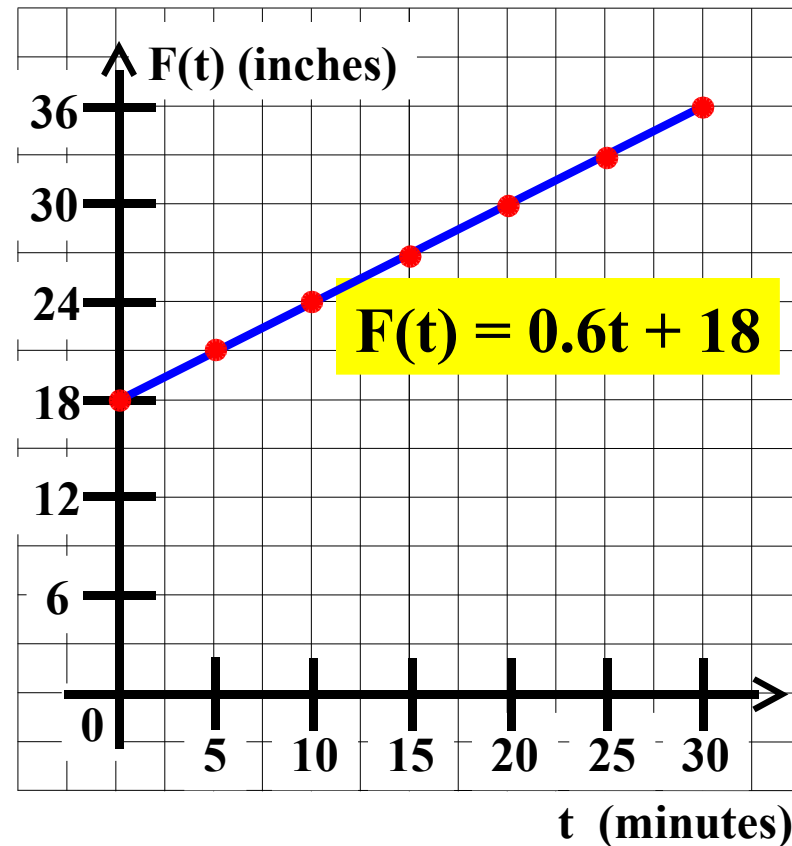17. How long will it take to fill the tank? **30 minutes**   19. Graph function F.

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

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0	18
5	21
10	24
15	27
20	30
25	33
30	36

domain
[0, 30]

range
[18, 36]

23. **Evaluate F(10).**

F(10) =

F(t) (inches)

$F(t) = 0.6t + 18$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.
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0	18
5	21
10	24
15	27
20	30
25	33
30	36

domain

[0, 30]

range

[18, 36]

23. **Evaluate F(10).**

$$F(10) = 24$$

$$F(t) = 0.6t + 18$$

F(t) (inches)

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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**   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
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25	33
30	36

domain

[0, 30]

range

[18, 36]

23. **Evaluate F(10).**

$F(10) = 24$

$F(t) = 0.6t + 18$

F(t) (inches)

Algebra II   Class Worksheet #5   Unit 3

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.
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0	18
5	21
10	24
15	27
20	30
25	33
30	36

domain

[0, 30]

range

[18, 36]

23. **Evaluate F(10).**

What does F(10) represent in terms of the problem?

$$F(10) = 24$$

F(t) (inches)

$$F(t) = 0.6t + 18$$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.
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0	18
5	21
10	24
15	27
20	30
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domain

[0, 30]

range

[18, 36]

23. **Evaluate F(10).**

What does F(10) represent in terms of the problem?

$$F(10) = 24$$

F(10) represents

F(t) (inches)

$$F(t) = 0.6t + 18$$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.
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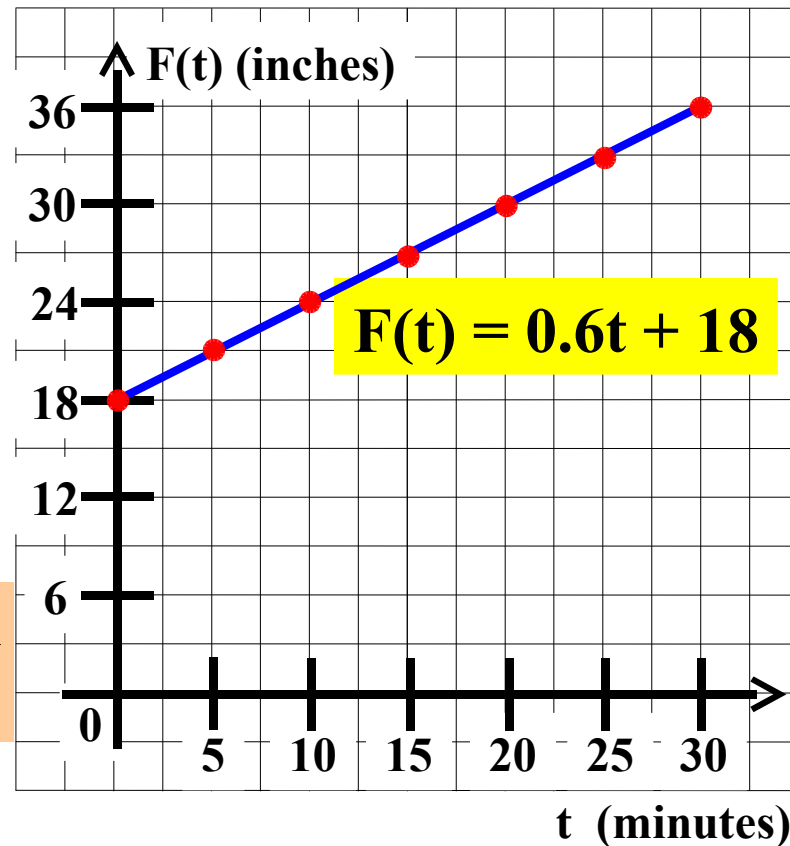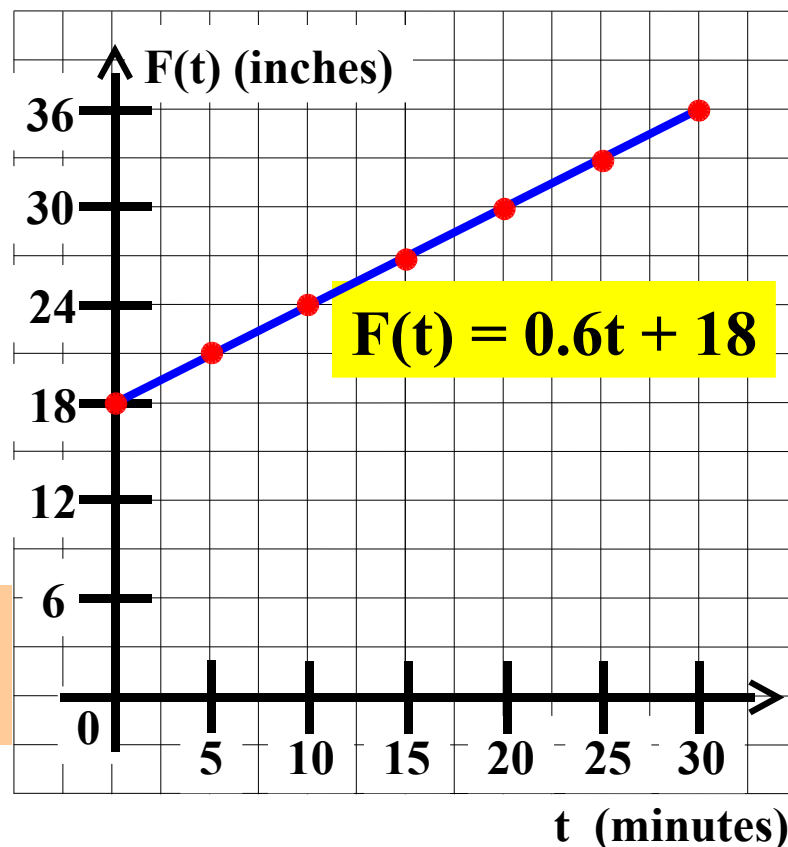**range**

[18, 36]

F(t) = 0.6t + 18

23. **Evaluate F(10).**

What does F(10) represent in terms of the problem?

$$F(10) = 24$$

F(10) represents the depth of the water

Algebra II   Class Worksheet #5   Unit 3

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10	24
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domain

[0, 30]

range

[18, 36]

$F(t) = 0.6t + 18$
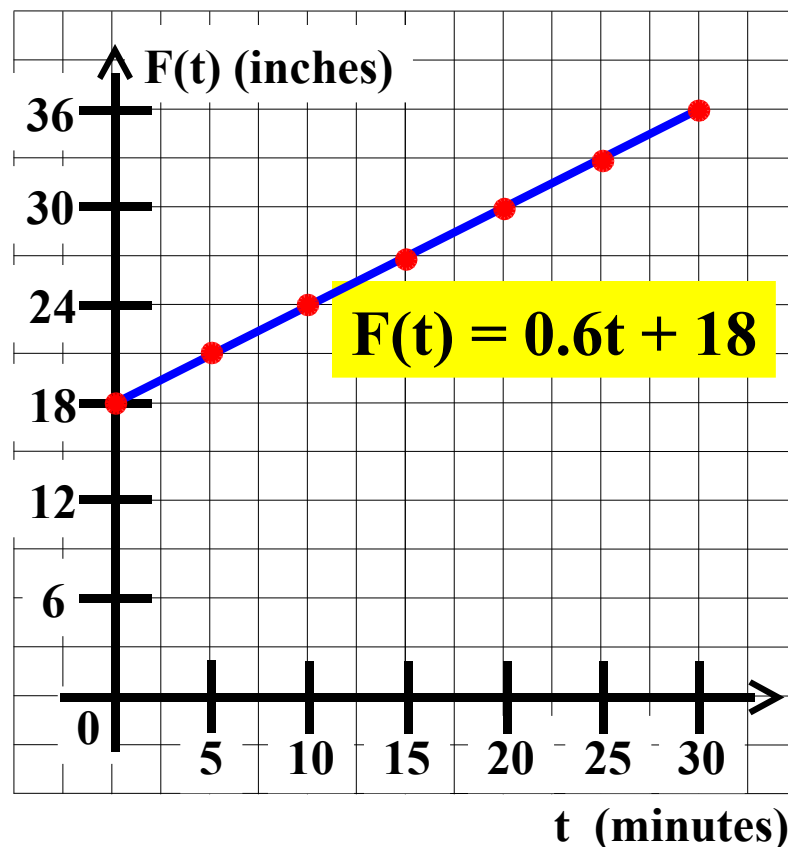
23. **Evaluate F(10).**

What does F(10) represent in terms of the problem?

$F(10) = 24$

F(10) represents the depth of the water after 10 minutes.

Algebra II   Class Worksheet #5   Unit 3

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.
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5	21
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domain

[0, 30]

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[18, 36]

23. **Evaluate F(10).**

What does F(10) represent in terms of the problem?

$F(t) = 0.6t + 18$

F(t) (inches)

t (minutes)

F(10) = 24 inches

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

Algebra II   Class Worksheet #5   Unit 3

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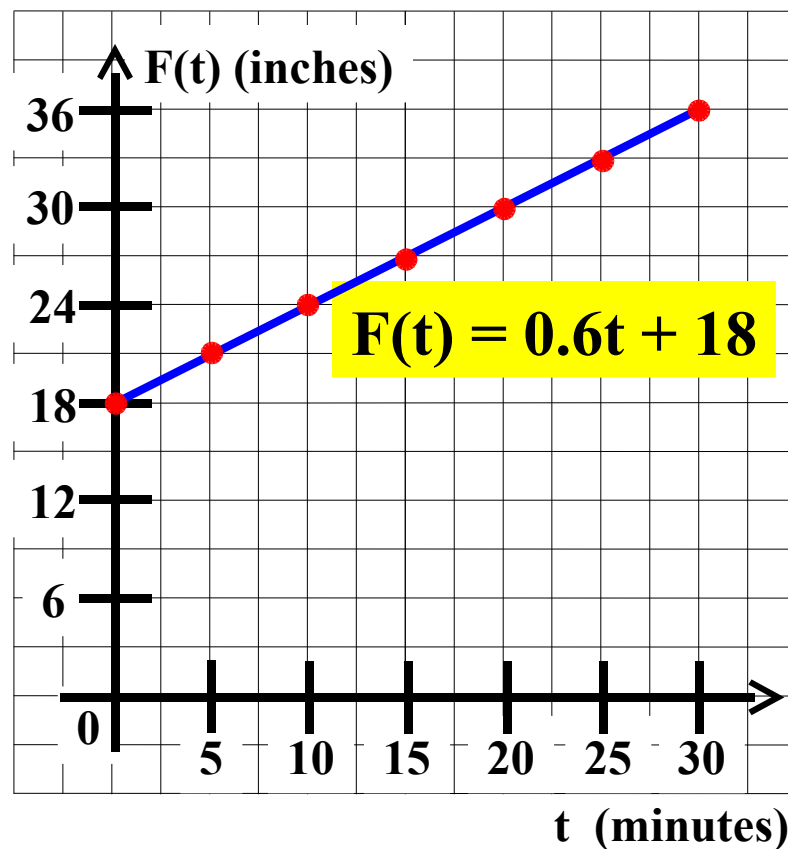every 5 minutes from t = 0 until
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F(t) (inches)

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t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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24. **If F(t) = 30, then find the value of t.**

$$F(t) = 0.6t + 18$$

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F(t) (inches)

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domain

[0, 30]

range

[18, 36]

24. If F(t) = 30, then find the value of t.

$$F(t) = 30 \implies t = 20$$

F(t) (inches)

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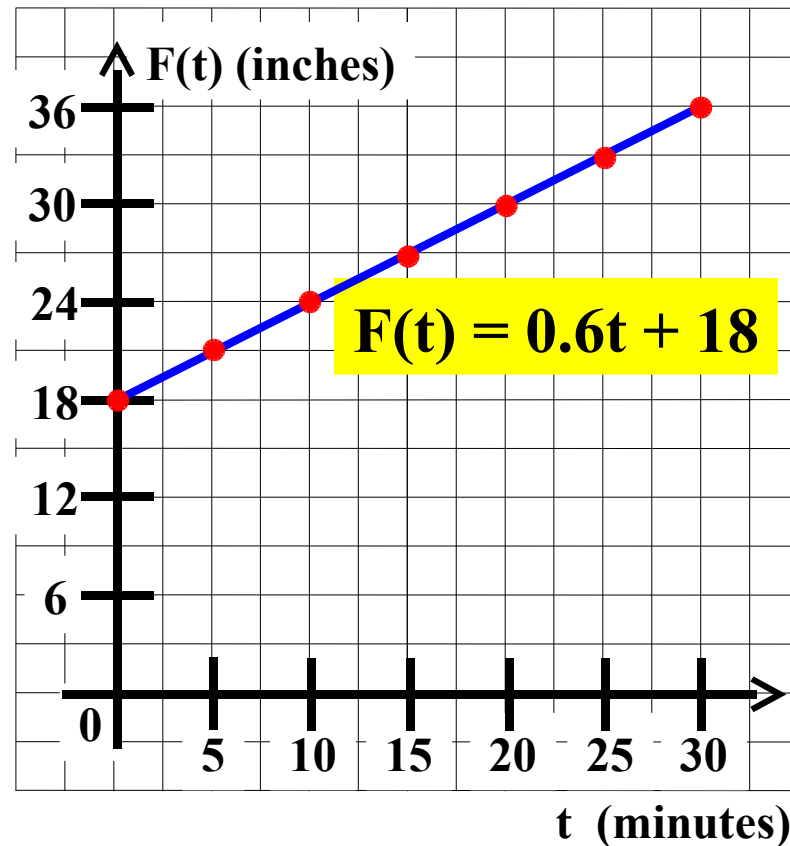| t	F(t)
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domain

[0, 30]

range

[18, 36]

24. **If F(t) = 30, then find the value of t.**

What does this value of t represent in terms of the problem?

$F(t) = 30 \implies t = 20$

F(t) (inches)

$F(t) = 0.6t + 18$

t (minutes)

Algebra II Class Worksheet #5 Unit 3

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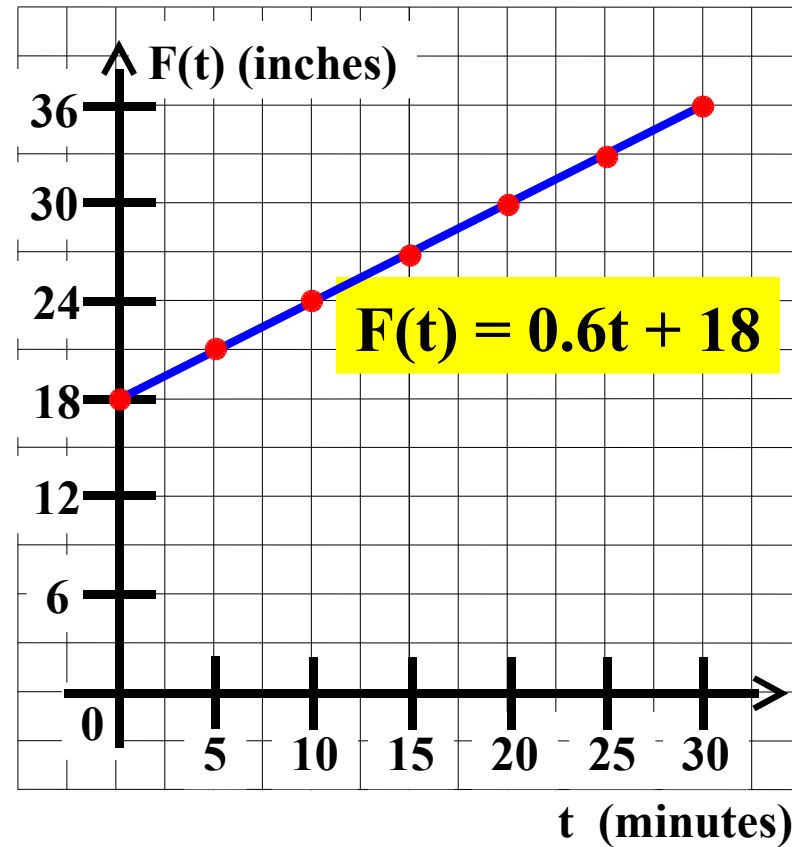| t	F(t)
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5	21
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domain

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range

[18, 36]

24. **If F(t) = 30, then find the value of t.**

What does this value of t represent in terms of the problem?

$$F(t) = 30 \implies t = 20$$

This represents

$F(t)$ (inches)

$$F(t) = 0.6t + 18$$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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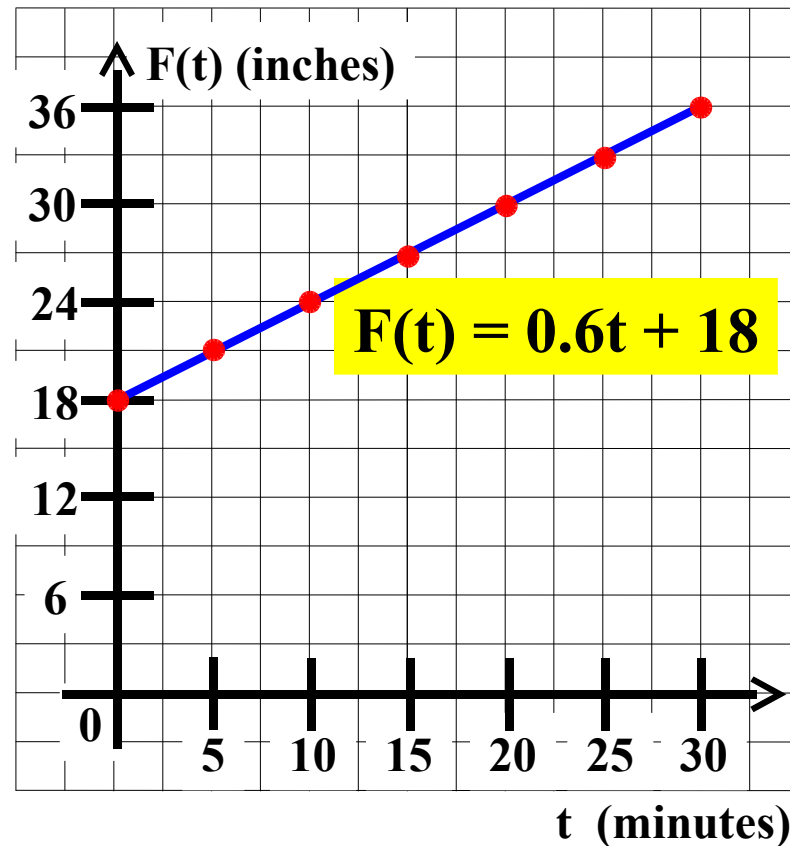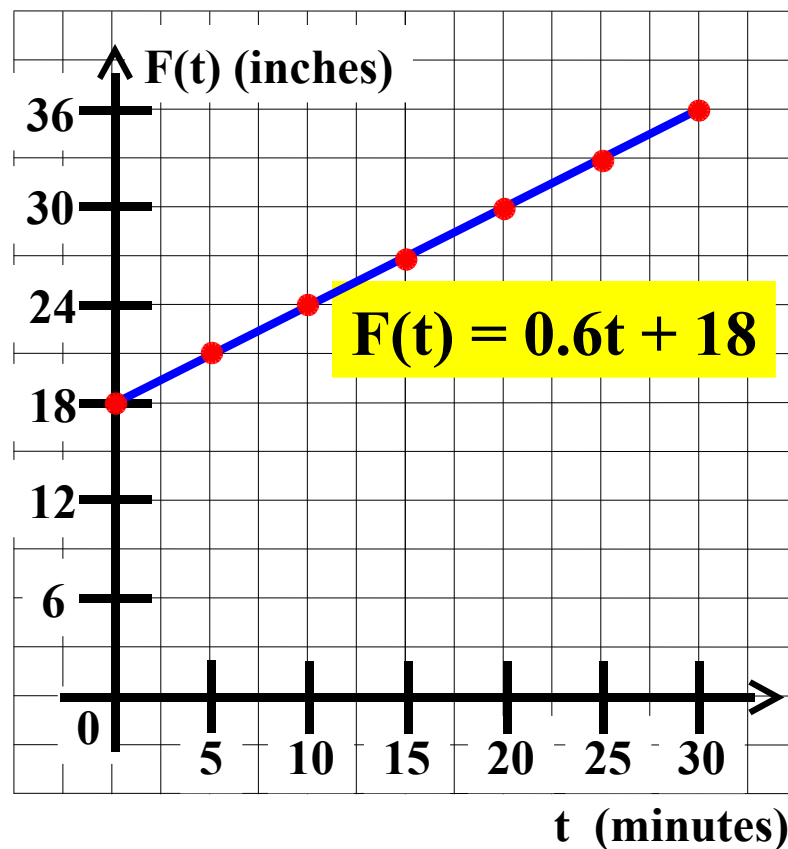| t	F(t)
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24. **If F(t) = 30, then find the value of t.**

What does this value of t represent in terms of the problem?

$$F(t) = 30 \Longrightarrow t = 20$$

This represents <u>the time</u>

F(t) (inches)

$$F(t) = 0.6t + 18$$

t (minutes)

Algebra II   Class Worksheet #5   Unit 3

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.
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5	21
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domain

[0, 30]

range

[18, 36]

24. **If F(t) = 30, then find the value of t.**

What does this value of t represent in terms of the problem?

$F(t) = 0.6t + 18$

$F(t) = 30 \implies t = 20$

This represents <u>the time</u> it took for the water to be 30 inches deep.

Algebra II   Class Worksheet #5   Unit 3

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.
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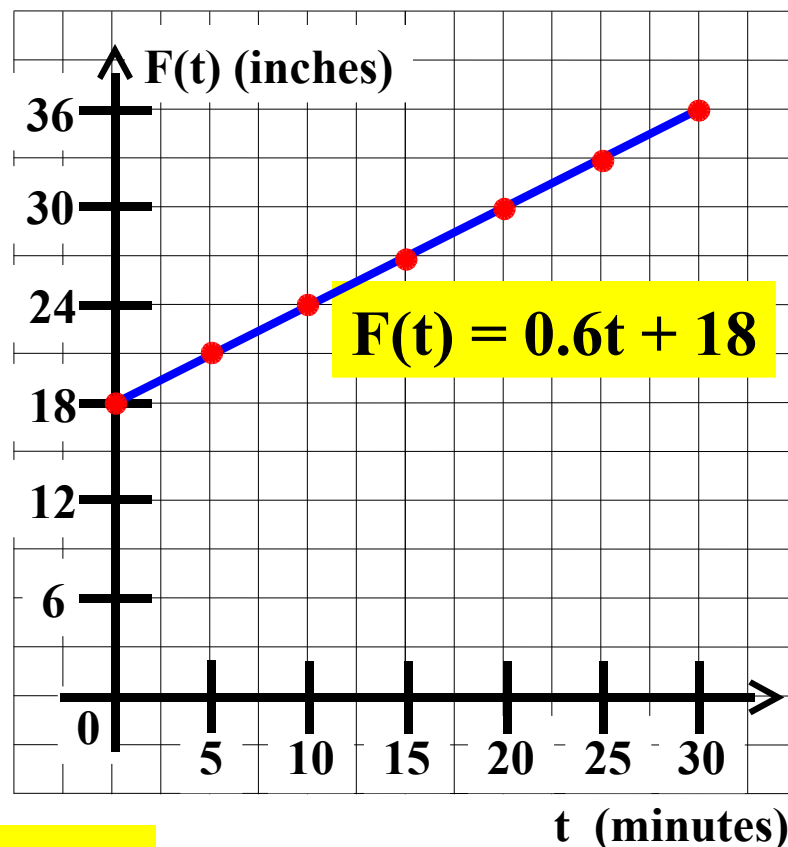| t	F(t)
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5	21
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domain

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range

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24. **If F(t) = 30, then find the value of t.**
What does this value of t represent in terms of the problem?

$$F(t) = 0.6t + 18$$

F(t) = 30 ⟹ t = 20 minutes

This represents the time it took for the water to be 30 inches deep.

Algebra II   Class Worksheet #5   Unit 3

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.
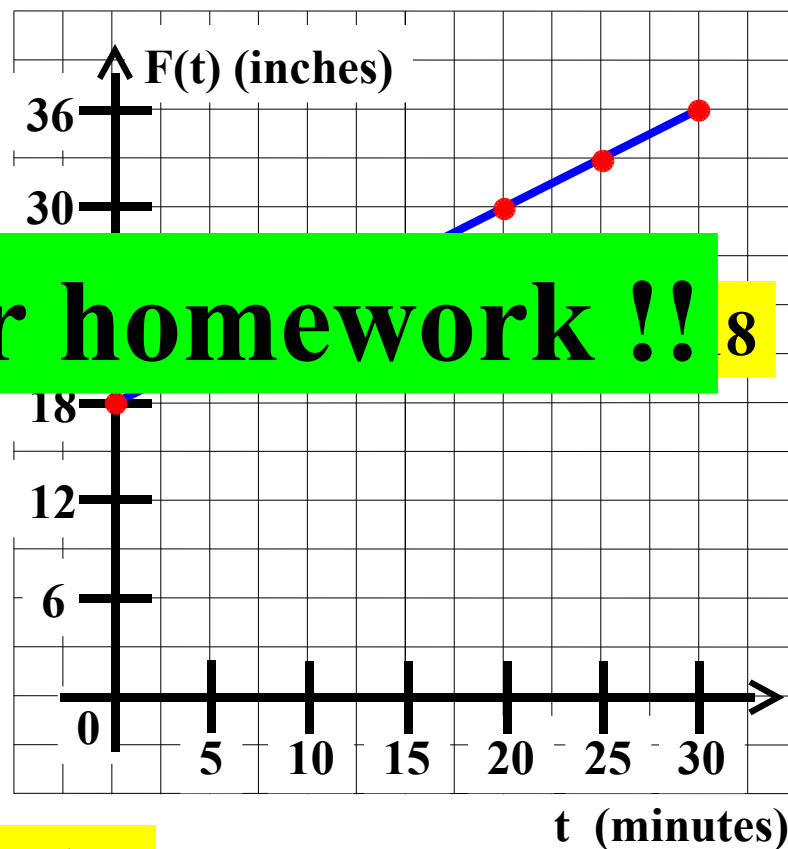Let t represent the time that water has been pumped into the tank (in **minutes**).
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domain

t	F(t)
5	21
10	24
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[18, 36]

19. **Graph function F.**

F(t) (inches)

24. If F(t) = 30, then find the value of t.
What does this value of t represent in terms of the problem?

F(t) = 30 ⟹ t = 20 minutes

This represents the time it took for the water to be 30 inches deep.

Good luck on your homework !!