Algebra I Worksheet #5 Unit 3 Selected Solutions

Solve each of the following problems algebraically. For each problem, you **must**

a. **represent** all unknowns in terms of the same variable,
b. write an **equation** for the problem,
c. **solve** your equation showing your steps neatly organized, and
d. **answer** the question using a complete sentence.

2. The sum of five consecutive even whole numbers is 200. What are the whole numbers?

x
x + 2
x + 4
x + 6
x + 8

$5x + 20 = 200$
$5x = 180$
x = 36

They are 36, 38, 40, 42, and 44.

4. Paul is thinking of a number. If he multiplies his number by eight and then subtracts three, he gets 245. What was Paulôs original number?

Paulôs number : x

$8x - 3 = 245$
$8x = 248$
x = 31

Paul's number was 31.

6. Jane and Sally drive toward each other from places that are 445 miles apart. Jane averages 43 miles per hour, while Sally averages 46 miles per hour. If they both start driving at 9:00 AM, then at what time will they meet?

	driving time (hours)	rate (mph)	distance (miles)
Jane	x	43	43x
Sally	x	46	46x
			445

total distance : 445

$43x + 46x = 445$
$89x = 445$
x = 5 hours

They both left at 9:00 AM and drove for five hours,

They will meet at 2:00 PM.