

Warm Up

October 4, 2018

1.) ~~Tony needed to flag down a taxi cab after basketball practice.~~
The cab charges $\$0.20$ per mile and an initial fee of $\$3.00$. Write an expression that Tony can use to determine the amount of money it will cost him to get home from practice.

$$X = \text{miles} = .20x + 3.00$$

2.) Together Theodore and Derrick have $\$33.10$. Theodore has $\$3.05$ more than 4 times as much as Derrick. How much each boy have?

$$\begin{array}{r} + \\ 4x + 3.05 \\ \hline \end{array} + \begin{array}{r} x \\ x \\ \hline \end{array} = 33.10$$

Theo Derr.

$$5x + 3.05 = 33.10$$

$$\begin{array}{r} - 3.05 \\ \hline 5x = 30.05 \end{array}$$

$$\frac{5x = 30.05}{5} = \frac{30.05}{5}$$

$$x = 6.01$$

Derrick - $\$6.01$
Theo - $\$27.09$

3.) Use order of operations to simplify the following expression:

$$2 - 5[(4 - 12) - 3]$$

$$2 - 5[-8 - 3]$$

$$2 - 5(-11)$$

$$2 + 55$$

$$57$$

Finding 2 Numbers Practice

3. The larger of two numbers is seven less than three times the smaller number. If the sum of the numbers is 61, find the numbers.

$x = \text{smaller \#}$
 $3x - 7 = \text{larger \#}$

$$\begin{aligned} x + 3x - 7 &= 61 \\ 4x - 7 &= 61 \\ +7 \quad +7 & \\ \hline 4x &= 68 \end{aligned}$$

$x = 17$
 $3x - 7 = 44$

4. The larger of two numbers is one more than four times the smaller number. If the sum of the numbers is 106, find the numbers.

$x = \text{smaller \#}$
 $4x + 1 = \text{larger \#}$

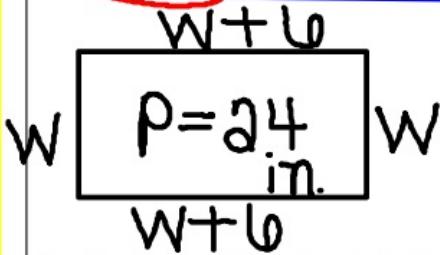
$$\begin{aligned} x + 4x + 1 &= 106 \\ 5x + 1 &= 106 \\ -1 \quad -1 & \\ \hline 5x &= 105 \\ \underline{5} \quad \underline{5} & \\ x &= 21 \end{aligned}$$

$x = 21$
 $4x + 1 = 85$

type 2 Perimeter of Rectangles

Add up all the sides!

5. The length of a rectangle is six inches more than its width. If the perimeter of the rectangle is 24 inches, find its dimensions.

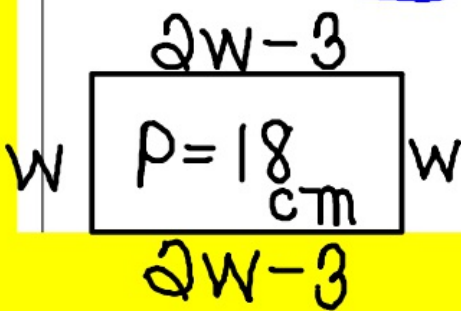


$$\begin{aligned}
 & \text{L} + \text{W} \\
 & \text{W} + 6 + \text{W} + 6 + \text{W} + \text{W} = 24 \\
 & 4\text{W} + 12 = 24 \\
 & \quad -12 \quad -12 \\
 & \hline
 & 4\text{W} = 12
 \end{aligned}$$

W = 3 in.
L = 9 in.

6. The length of a rectangle is five inches more than four times its width. If the perimeter of the rectangle is 90 inches, find its dimensions.

7. The length of a rectangle is three centimeters less than twice its width. If the perimeter of the rectangle is 18 centimeters, find its dimensions.



$$\begin{aligned}
 & \text{L} + \text{W} \\
 & 2\text{W} - 3 + 2\text{W} - 3 + \text{W} + \text{W} = 18 \\
 & 6\text{W} - 6 = 18 \\
 & \quad +6 +6 \\
 & \hline
 & 6\text{W} = 24 \\
 & \frac{6\text{W}}{6} = \frac{24}{6} \\
 & \text{W} = 4\text{cm}
 \end{aligned}$$

$$\begin{aligned}
 \text{L} &= 2\text{W} - 3 \\
 \text{L} &= 2(4) - 3 \\
 \text{L} &= 8 - 3 \\
 \text{L} &= 5
 \end{aligned}$$

W = 4cm
L = 5cm

8. The length of a rectangle is 7 inches more than its width. If the perimeter of the rectangle is 66 inches, find its dimensions.

9. The length of a rectangle is five less than twice its width. If the perimeter of the rectangle is 56 inches, find its dimensions.

L
 $2w - 5$
 w $P = 56$ in. w

$2w - 5 + 2w - 5 + w + w = 56$

$$2w - 5$$
$$L = 2w - 5$$
$$= 2(11) - 5$$
$$L = 17$$
$$6w - 10 = 56$$
$$\begin{array}{r} +10 \quad +10 \\ \hline 6w = 66 \\ \hline \frac{6w}{6} = \frac{66}{6} \\ w = 11 \end{array}$$

$w = 11$ in.
 $L = 17$ in.

type 3: Finding Consecutive Numbers

- What does consecutive mean? back to back
- Give examples of the following:

consecutive numbers	1, 2, 3, 4, 5...../ $n, n+1, n+2$
consecutive <u>even</u> numbers	2, 4, 6, 8,..../ $n, n+2, n+4$
consecutive <u>odd</u> numbers	17, 19, 21, 23,..../ $n, n+2, n+4$

10. The sum of two consecutive numbers is 123. Find the numbers.

$$n = 1^{\text{st}} \#$$

$$n+1 = 2^{\text{nd}} \#$$

$$n + n+1 = 123$$

$$2n+1 = 123$$

$$\begin{array}{r} -1 \quad -1 \\ \hline 2n = 122 \end{array}$$

$$n = 61$$

$$n+1 = 62$$

11. The sum of two consecutive numbers is 85, find the numbers.

$$n = 1^{\text{st}} \#$$

$$n+1 = 2^{\text{nd}} \#$$

$$n + n+1 = 85$$

$$2n+1 = 85$$

$$\begin{array}{r} -1 \quad -1 \\ \hline 2n = 84 \end{array}$$

$$n = 42$$

$$n+1 = 43$$

$$\frac{2n = 84}{2} \quad \frac{2n = 84}{2}$$

12. Find two consecutive **even** numbers whose sum is 54.

13. The sum of two consecutive **odd** numbers is 128. Find the numbers.

14. The sum of three consecutive **even** numbers is 138. Find the numbers.

15. The sum of three consecutive **odd** numbers is 57. What are the three numbers?

MR. WILKS' CHALLENGE!



In cross-country, the team score is determined by the place each individual runner finishes. (For example 1st place is one point, 16th place is 16 points, etc.) In their latest meet, Mr. Wilks' team scored 55 points. If there were five runners on the team and each runner finished one after another, what places did they each come in?