

HW: Word Problem Worksheet

Warm up:

Find 5 consecutive odd integers whose sum is 275.

$$x + x + 2 + x + 4 + x + 6 + x + 8 = 275$$

$$\begin{array}{r} 5x + 20 = 275 \\ -20 \quad -20 \\ \hline \end{array}$$

$$\frac{5x}{5} = \frac{255}{5} \quad x = 51$$

51, 53, 55, 57, and 59

Brian has \$88 in his savings account. If he saves \$3.50 per week, how long will it take him to have \$200 in his account?

$$\begin{array}{r} 3.50w + 88 = 200 \\ -88 \quad -88 \\ \hline 3.5w = 112 \\ \frac{3.5}{3.5} \quad \frac{112}{3.5} \\ \hline w = 32 \end{array}$$

32 weeks

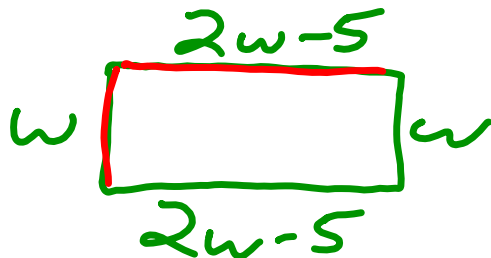
Norah has three times as many apples as Peter. Together they have 64 apples. How many apples does each person have?

$$\frac{3p}{\text{Norah}} + \frac{p}{\text{Peter}} = \frac{64}{\text{total}}$$

$$\frac{4p}{4} = \frac{64}{4}$$
$$p = 16$$

Peter \rightarrow 16 apples
Norah \rightarrow 48 apples

The perimeter of a rectangle is 32m. The length is 5m less than twice the width. What are the dimensions?



$7m \times 9m$

$$w + 2w - 5 + w + 2w - 5 = 32$$

$$6w - 10 = 32$$

$$\begin{array}{r} 6w - 10 = 32 \\ +10 \quad +10 \\ \hline 6w = 42 \\ \frac{6}{6} \quad \frac{6}{6} \\ \hline w = 7 \end{array}$$

HW Solutions

24) 8

25) 5

26) -30, -28, -26

27) 45, 47, 49

28) 12, 13, 14, 15

29) -37, -36, -35, -34

56) never

63) 1379 deer

Q24

$$\frac{3}{4}n - 14 = -8$$

$+14$ $+14$

$$\frac{4}{3} \left(\frac{3}{4}n \right) = \cancel{(-6)} \frac{4}{3}$$

$$n = 8$$

$$\begin{array}{r} 17 = 6n - 13 \\ +13 \qquad \qquad +13 \\ \hline 30 = 6n \\ \underline{\quad 6} \quad \underline{\quad 6} \\ 5 = n \end{array}$$

②

$$x + x + 2 + x + 4 = 141$$

$$3x + 6 = 141$$

$$\begin{array}{r} -6 \quad -6 \\ \hline \end{array}$$

$$\begin{array}{r} 3x = 135 \\ \hline \end{array}$$

$$\begin{array}{r} \frac{3x}{3} = \frac{135}{3} \\ \hline \end{array}$$

$$x = 45$$

45, 47, 49

②

$$\frac{x}{1} + \frac{x+1}{1} + \frac{x+2}{1} + \frac{x+3}{1} = -142$$

$$\frac{4x+6}{-6} = \frac{-142}{-6}$$

$$\frac{4x}{4} = \frac{-148}{4}$$

$$x = -37 \quad (-37, -36, -35, -34)$$

$$(5) \quad 5(y-7) + 2[y - 3(y-5)] = 0$$

$$5y - 35 + 2[y - 3y + 15] = 0$$

$$5y - 35 + 2y - 6y + 30 = 0$$

$$\begin{array}{r} y - 5 = 0 \\ + 5 \quad + 5 \\ \hline y = 5 \end{array}$$

$$\textcircled{2} \quad y + 5 - 4y = -10$$

$$\begin{array}{r} -3y + 5 = -10 \\ \hline \end{array}$$

$$\begin{array}{r} -3y = -15 \\ \hline \end{array}$$

$$\begin{array}{r} y = 5 \\ \hline \end{array}$$

$$\textcircled{5} \quad (x-13) - (x-5) + 2x = 0$$

$$x - 13 - x + 5 + 2x = 0$$

$$\begin{array}{r} 2x - 8 = 0 \\ + 8 \quad + 8 \\ \hline 2x = 8 \\ \hline x = 4 \end{array}$$

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$$5m - 3[7 - (1 - 2m)] = 0$$

$$5m - 3[7 - 1 + 2m] = 0$$

$$5m - 3[6 + 2m] = 0$$

$$5m - 18 - 6m = 0$$

$$\begin{array}{r} -m - 18 = 0 \\ + 18 18 \\ \hline -m = 18 \end{array}$$

$$\frac{-m}{-1} = \frac{18}{-1}$$

$$m = -18$$

$$\textcircled{20} \quad x + x + 2 + x + 4 = -84$$

$$3x + 6 = -84$$

$$\begin{array}{r} -6 \quad -6 \\ \hline 3x = -90 \\ \hline \frac{3x}{3} = \frac{-90}{3} \end{array}$$

$$\hline x = -30$$

$$-30, -28, -26$$

Q3

$$\begin{array}{r} 1286 = m - 93 \\ + 93 \quad \quad \quad + 93 \\ \hline \end{array}$$

$$1379 = m$$

1379 male deer

1) Josh has four dollars more than five times as much as Vince. Together they have \$76. How much money does each person have?

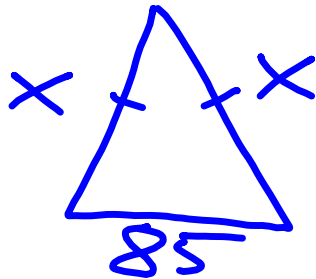
2) In an isosceles triangle, there are two sides, called legs, with the same length. The third side is called the base. If an isosceles triangle has a perimeter of 345 cm and base length 85 cm, what is the length of each leg?

3) A 1000L tank now contains 240 L of water. How long will it take to fill the tank using a pump that pumps 25L/min?

4) A company added a new oil tank that holds 350 barrels of oil more than its old oil tank. Together they hold 3650 barrels of oil. How much does each tank hold?

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$$x + x + 85 = 345$$

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