



Warm Up Grade 8

Test _____

ATTACHED to yesterday's sheets

One-third of the team's supply of hockey pucks were taken from the locker room to the bench. During the game, 5 pucks were caught by fans. At the end of the game, there were 7 pucks left at the bench. What was the team's original supply of pucks?

let $x \equiv$ the original supply of pucks.

a) Write an equation you can use to solve the problem

b) Solve the equation

c) Verify the solution

$$\frac{1}{3}x - 5 = 7$$

$$\frac{x}{3} - \cancel{5} + 5 = 7 + 5$$

$$\frac{x}{3} = 12$$

$$\cancel{3} \cdot \frac{x}{3} = 12 \cdot 3$$

$$x = 36$$

LHS	RHS
$\frac{x}{3} - 5$	7
$\frac{36}{3} - 5$	
$12 - 5$	
7	

} Same ✓

The team's original supply of puck was 36.

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#1, 2 - Discuss

3a) $\frac{t}{5} = 6$

$$\frac{t}{5} \times 5 = 6 \times 5$$
$$t = 30$$

LS
 $\frac{t}{5}$
30
5
6

RS
6

b) $\frac{a}{7} = 8$

$$\frac{a}{7} \times 7 = 8 \times 7$$
$$a = 56$$

LS
56
7
8

RS
8

c) $\frac{b}{6} = 3$

$$\frac{b}{6} \times 6 = 3 \times 6$$
$$b = 18$$

LS
18
6
3

RS
3

d) $\frac{c}{3} = 9$

$$\frac{c}{3} \times 3 = 9 \times 3$$
$$c = 27$$

LS
27
3
9

RS
9

5 $b = \#$ golf balls in bag

$$\frac{b}{4} = 8$$

$$\frac{b}{4} \times 4 = 8 \times 4$$

$$b = 32$$

$$\begin{array}{l} \text{LS} \\ \frac{b}{4} \\ \frac{32}{4} \\ = 8 \end{array}$$

$$\begin{array}{l} \text{RS} \\ 8 \end{array}$$

There are 32
golf balls in the bag.

b. $n =$ the number

$$\text{a) } \frac{n}{6} = 9$$

$$\frac{n}{6} \times 6 = 9 \times 6$$

$$n = 54$$

$$\begin{array}{l} \text{LS} \\ \frac{n}{6} = \frac{54}{6} \\ = 9 \end{array}$$

$$\begin{array}{l} \text{RS} \\ 9 \end{array}$$

$$\text{b) } \frac{n}{-4} = -3$$

$$\frac{n}{-4} \times -4 = -3 \times -4$$

$$n = +12$$

$$\begin{array}{l} \text{LS} \\ \frac{n}{-4} = \frac{12}{-4} \\ = -3 \end{array}$$

$$\begin{array}{l} \text{RS} \\ -3 \end{array}$$

$$\text{c) } \frac{n}{-5} = 7$$

$$\frac{n}{-5} \times -5 = 7 \times -5$$

$$n = -35$$

$$\begin{array}{l} \text{LS} \\ \frac{n}{-5} = \frac{-35}{-5} \\ = 7 \end{array}$$

$$\begin{array}{l} \text{RS} \\ 7 \end{array}$$

$$7. a) \frac{n}{4} + 3 = 10$$

$$\frac{n}{4} + 3 - 3 = 10 - 3$$

$$\frac{n}{4} = 7$$

$$\frac{n}{4} \times 4 = 7 \times 4$$

$$n = 28$$

$$\begin{array}{l} \text{LS} \\ \frac{n}{4} + 3 \\ \frac{28}{4} + 3 \\ 7 + 3 \\ 10 \end{array} \qquad \begin{array}{l} \text{RS} \\ 10 \end{array}$$

$$b) \frac{m}{3} - 2 = 9$$

$$\frac{m}{3} - 2 + 2 = 9 + 2$$

$$\frac{m}{3} = 11$$

$$\frac{m}{3} \times 3 = 11 \times 3$$

$$m = 33$$

$$\begin{array}{l} \text{LS} \\ \frac{m}{3} - 2 \\ \frac{33}{3} - 2 \\ 11 - 2 \\ 9 \end{array} \qquad \begin{array}{l} \text{RS} \\ 9 \end{array}$$

$$c) 13 + \frac{x}{2} = 25$$

$$13 + \frac{x}{2} - 13 = 25 - 13$$

$$\frac{x}{2} = 12$$

$$\frac{x}{2} \times 2 = 12 \times 2$$

$$x = 24$$

$$\begin{array}{l} \text{LS} \\ 13 + \frac{x}{2} \\ 13 + \frac{24}{2} \\ 13 + 12 \\ 25 \end{array} \qquad \begin{array}{l} \text{RS} \\ 25 \end{array}$$

$$d) -9 + \frac{s}{2} = 2$$

$$-9 + \frac{s}{2} + 9 = 2 + 9$$

$$\frac{s}{2} = 11$$

$$\frac{s}{2} \times 2 = 11 \times 2$$

$$s = 22$$

$$\begin{array}{l} \text{LS} \\ -9 + \frac{s}{2} \\ -9 + \frac{22}{2} \\ -9 + 11 \\ 2 \end{array} \qquad \begin{array}{l} \text{RS} \\ 2 \end{array}$$

Write an equation for the following and solve

a) one-fourth of the elementary school went on a trip with 3 chaperones. There were 90 people on the trip. How many elementary students are there in all?

let $x = \#$ of elementary students

$$\frac{x}{4} + 3 = 90$$

$$\frac{x}{4} + 3 - 3 = 90 - 3$$

$$\frac{x}{4} = 87$$

$$4 \cdot \frac{x}{4} = 87 \cdot 4$$

$$x = 348$$

There were 348 students on the trip.

b) A number divided by 5 is subtracted from 8 is 14

$$8 - \frac{x}{5} = 14$$

$$\cancel{8} - \frac{x}{5} = \underline{14 - 8}$$

$$-\frac{x}{5} = 6$$

$$\cancel{5} \cdot \frac{-x}{5} = \underline{6 \cdot 5}$$

$$-x = 30$$

$$\frac{-x}{-1} = \frac{30}{-1}$$

$$x = -30$$

Denominator as Variable

What if we have a fraction with the variable as the denominator?

$$\frac{20}{x} + 7 = 12$$

x

Step 1: Get rid of add or subtract first by doing the opposite

$$\frac{20}{x} + 7 - 7 = 12 - 7$$

x

$$\frac{20}{x} = 5$$

x

Step 2: Bring the variable to the top by multiplying each side by that variable.

$$x \times \frac{20}{x} = 5 \times x$$

x

$$20 = 5x$$

$$\frac{20}{5} = \frac{5x}{5}$$

$$4 = x$$

Step 3: Get the variable alone by dividing each side by the number in front of x.

$$4 = x$$

Class/Homework

Quiz Tomorrow

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8, #9, #12, #13ab

Test _____

Need more #11
Read Page 338-341

&

Sheet Extra Practice 3

1, #2 ,#3, #4 ,#5, #6

Attachments

Extra Practice 3 Involving Fractios.pdf