



Warm Up Grade 8

Test Jan. 27

## Warm up Quiz Tomorrow

(3 questions using algebra)

One-third of the team's supply of hockey pucks was 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  $x \equiv$  team's original supply of hockey puck.

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

b) Solve the equation 
$$\frac{x}{3} - 5 = 7$$

c) Verify the solution 
$$\frac{x}{3} - 5 + 5 = 7 + 5$$

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

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

$$x = 36$$

The team's original amount of hockey puck was 36.

pg 336

#1, 2 - Discuss

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

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

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

RS  
6

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

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

LS  
 $\frac{a}{7}$   
 $\frac{56}{7}$   
8

RS  
8

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

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

LS  
 $\frac{b}{6}$   
 $\frac{18}{6}$   
3

RS  
3

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

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

LS  
 $\frac{c}{3}$   
 $\frac{27}{3}$   
9

RS  
9

$$4 \text{ a) } \frac{d}{4} = 5$$

$$\frac{d}{4} \times 4 = 5 \times 4$$

$$d = 20$$

$$\begin{array}{l} \text{LS} \\ \frac{d}{4} \cdot \frac{4}{4} \\ = \frac{20}{4} \\ = 5 \end{array}$$

$$\begin{array}{l} \text{RS} \\ 5 \end{array}$$

$$\text{b) } \frac{f}{8} = -5$$

$$\frac{f}{8} \times 8 = -5 \times 8$$

$$f = -40$$

$$\begin{array}{l} \text{LU} \\ \frac{f}{8} \cdot \frac{8}{8} \\ = \frac{-40}{8} \\ = -5 \end{array}$$

$$\begin{array}{l} \text{RS} \\ -5 \end{array}$$

$$\text{c) } \frac{k}{9} = -4$$

$$\frac{k}{9} \times 9 = -4 \times 9$$

$$k = -36$$

$$\begin{array}{l} \text{LS} \\ \frac{k}{9} = \frac{-36}{9} \\ = -4 \end{array}$$

$$\begin{array}{l} \text{RS} \\ -4 \end{array}$$

$$\text{d) } \frac{m}{-5} = -7$$

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

$$m = 35$$

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

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

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) <sup>÷ 4</sup> one-fourth of the elementary school went on a trip with 3 chaperones. There was 90 people on the trip. How many elementary students are there in all?

let  $x$  = # of elementary students in all

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

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

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

$$x = 348$$

The total amount of elementary students is 348.

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

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

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

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

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

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

$$x = -30$$

## 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

pg. 336

*ac a*  
# 8, #9, #12, ~~#11~~

*Extra practice*



Sheet Extra Practice 3

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

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Test \_\_\_\_\_

*NHL  
23 is  
the best  
game*

Need more ~~#11~~

Read Page 338-341





## Attachments

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Extra Practice 3 Involving Fractios.pdf