

## Practice Questions...

Distribute and solve

1) a)  $6(x - 8) = 24$

$6x - 48 = 24 + 48$

$$\frac{6x}{6} = \frac{72}{6}$$

$$x = 12$$

b)  $2(k + 3) = 16$

$2k + 6 = 16 - 6$

$$\frac{2k}{2} = \frac{10}{2}$$

$$k = 5$$

c)  $-3(x - 7) = 9$

$-3x + 21 = 9 - 21$

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

$$x = 4$$

1) Solve a)  $3x - 11 = 52$

$$\frac{3x}{3} = \frac{63}{3}$$

$$x = 21$$

b)  $\frac{n}{-4} + 5 = -8$

$$\frac{n}{-4} = -13$$

$$n = 52$$

Expand

2) a)  $10(9x - 8)$

$$90x - 80$$

b)  $3(-2g + 7)$

$$-6g + 21$$



For the problem, state the variable, write and solve the equation, verify and give a statement.

Sally has a cell phone that has a monthly charge of \$20 plus an additional \$0.05 for each call or text that is made. If Sally's bill last month was \$80.20, how many call/texts did she make?

x- # of calls/texts

$$0.05x + \overset{-20}{20} = 80.20 \overset{-20}{-20}$$

$$\frac{0.05x}{0.05} = \frac{60.20}{0.05}$$

$$x = 1204$$

$$0.05(1204) + 20 = 80.20$$

$$60.20 + 20 \quad \checkmark$$

$$80.20$$

Sally sent 1204 texts/calls last month.



# Class/Homework

pg. 347 #8, #10, #12, #13, #14

Sheet Extra Prac 5 # 1(a,d), #2(a,d), #3, #5

Unit Review

Page 350 #1 (no need to model, just answer),  
2, 3, 4, 5, 9, 10

8.



$$\begin{aligned}
 P &= \text{ststst} \\
 2b &= 8w + 8w \\
 2b &= 16 + 2w \\
 2b - 16 &= 16 + 2w - 16 \\
 10 &= 2w \\
 \frac{10}{2} &= \frac{2w}{2} \\
 5 &= w
 \end{aligned}$$

$$\begin{array}{l}
 \text{LS} \\
 2b
 \end{array}$$

$$\begin{array}{l}
 \text{RS} \\
 16 + 2w \\
 16 + 2 \times 5 \\
 16 + 10 \\
 26
 \end{array}$$

The width is 5cm

9  $n$  = price before reduced  
 $n - 5$  = reduced price

$$\begin{aligned}
 b(n - 5) &= 90 \\
 bn - 30 &= 90 \\
 bn - 30 + 30 &= 90 + 30 \\
 bn &= 120 \\
 \frac{bn}{b} &= \frac{120}{b} \\
 n &= 20
 \end{aligned}$$

$$\text{LS}$$

$$\text{RS}$$

The regular price of the t-shirts was \$20.

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10.  $c$  = cost of ticket $ct6$  = cost for each person

$$8(ct6) = 264$$

$$8c + 48 = 264$$

$$8c + 48 - 48 = 264 - 48$$

$$8c = 216$$

$$\frac{8c}{8} = \frac{216}{8}$$

Cost of red ticket was 27 ( $c = 27$ )

$$\begin{array}{l} \text{LS} \\ 8(ct6) \\ 8(27+6) \\ 8 \times 33 \\ 264 \end{array}$$

$$\begin{array}{l} \text{RS} \\ 264 \end{array}$$

11.  $n$  = the integer

$$-5(n+9) = 15$$

$$-5n + (-45) = 15$$

$$-5n - 45 + 45 = 15 + 45$$

$$-5n = 60$$

$$\frac{-5n}{-5} = \frac{60}{-5}$$

$$n = -12$$

The integer is -12

$$\begin{array}{l} \text{LS} \\ -5(n+9) \\ -5(-12+9) \\ -5 \times -3 \\ 15 \end{array}$$

$$\begin{array}{l} \text{RS} \\ 15 \end{array}$$

12.  $n =$  the integer

$$-4(n-7) = 36 \quad -4n - (-28)$$

$$-4n + 28 = 36$$

$$-4n + 28 - 28 = 36 - 28$$

$$-4n = 8$$

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

$$n = -2$$

The integer was  
 $-2$ .

$$\begin{array}{l} -4(n-7) \\ -4(-2-7) \\ -4x-9 \\ 36 \end{array}$$

$$R \begin{array}{l} 36 \end{array}$$

13 Kirsten's mistake was that she divided the left side by  $-8$ , and the right side by  $8$ .

$$b) -8x = -16$$

$$\frac{-8x}{-8} = \frac{-16}{8}$$

$$x = 2$$

$$\begin{aligned}
 14a) -10 &= 5(t-2) \\
 -10 &= 5t-10 \\
 -10+10 &= 5t-10+10 \\
 0 &= 5t \\
 \frac{0}{5} &= \frac{5t}{5} \\
 0 &= t
 \end{aligned}$$



LS  
-10

RS  
 $5(t-2)$   
 $5(0-2)$   
 $5x-2$   
 $-10$

$$\begin{aligned}
 b) 7 &= 2(p-3) \\
 7 &= 2p-6 \\
 7+6 &= 2p-6+6 \\
 13 &= 2p \\
 \frac{13}{2} &= \frac{2p}{2} \\
 6.5 &= p
 \end{aligned}$$

LS  
7

RS  
 $2(p-3)$   
 $2(6.5-3)$   
 $2 \times 3.5$   
 $7$

$$\begin{aligned}
 c) 4(r+5) &= 23 \\
 4r+20 &= 23 \\
 4r+20-20 &= 23-20 \\
 4r &= 3 \\
 \frac{4r}{4} &= \frac{3}{4} \\
 r &= \frac{3}{4}
 \end{aligned}$$

LS  
 $4(r+5)$   
 $4(0.75+5)$   
 $4 \times 5.75$   
 $23$

RS  
23

$$\begin{aligned}
 d) -3(s+6) &= 18 \\
 -3s-18 &= 18 \\
 -3s-18+18 &= 18+18 \\
 -3s &= 36 \\
 \frac{-3s}{-3} &= \frac{36}{-3} \\
 s &= -12
 \end{aligned}$$

LS  
 $-3(s+6)$   
 $-3(-12+6)$   
 $-3 \times -6$   
 $18$

RS  
18



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#1, #2, #3, #4, #7, #9, #10

Homework  
Solutions

$$1a) \frac{4x}{4} = \frac{-36}{4}$$

$$x = -9$$

$$b) -7x = 63$$

$$\frac{-7x}{-7} = \frac{63}{-7}$$

$$x = -9$$

$$c) 4x + 7 = 19$$

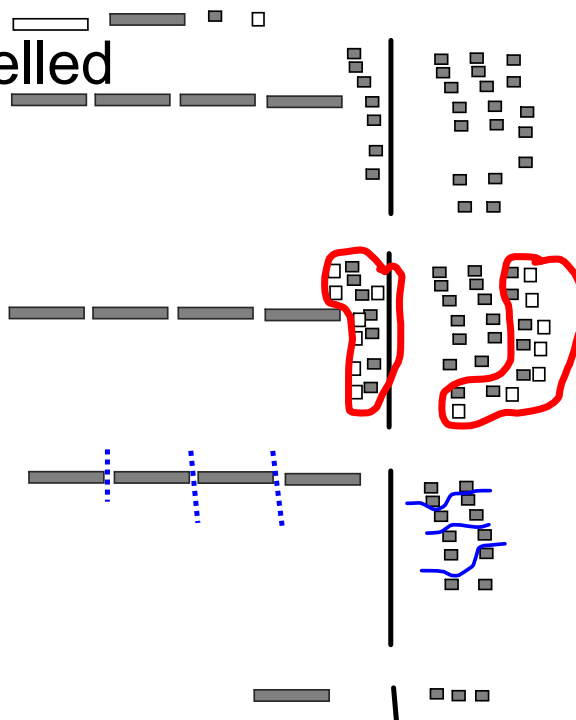
$$4x + 7 - 7 = 19 - 7$$

$$4x = 12$$

$$\frac{4x}{4} = \frac{12}{4}$$

$$x = 3$$

4c modelled



$$d) -3x + 5 = 17$$

$$-3x + 5 - 5 = 17 - 5$$

$$-3x = 12$$

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

$$x = -4$$

2  $g =$  number of bars

$$3g + 4 = 13$$

$$3g + 4 - 4 = 13 - 4$$

$$3g = 9$$

$$\frac{3g}{3} = \frac{9}{3}$$

$$g = 3$$

Alice has 3 bars.

$$\begin{array}{l} \text{LS} \\ 3g + 4 \\ 3 \times 3 + 4 \\ 9 + 4 \\ 13 \end{array}$$

$$\begin{array}{l} \text{RS} \\ 13 \end{array}$$

3)

a)  $4x + 9 = -27$

$$4x + 9 - 9 = -27 - 9$$

$$4x = -36$$

$$\frac{4x}{4} = \frac{-36}{4}$$

$$x = -9$$

$$x = -9$$

b)  $-5x + 8 = 23$

$$-5x + 8 - 8 = 23 - 8$$

$$-5x = 25$$

$$\frac{-5x}{-5} = \frac{25}{-5}$$

$$x = -5$$

$$x = -5$$

c)  $3x - 4 = -3$

$$3x - 4 + 4 = -3 + 4$$

$$3x = 1$$

$$\frac{3x}{3} = \frac{1}{3}$$

$$x = \frac{1}{3}$$

$$x = \frac{1}{3}$$

c)  $10 = 6x + 5$

$$6x + 5 = 10$$

$$6x + 5 - 5 = 10 - 5$$

$$6x = 5$$

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

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

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

4.  $p =$  number of people

$$12p + 125 = 545$$

$$12p + 125 - 125 = 545 - 125$$

$$12p = 420$$

$$\frac{12p}{12} = \frac{420}{12}$$

$$p = 35$$

35 people attended the banquet

$$\begin{array}{r} \text{L} \\ 12p + 125 \\ 12 \times 35 + 125 \\ 420 + 125 \\ 545 \end{array} \quad \begin{array}{r} \text{R} \\ 545 \end{array}$$

5a)  $\frac{n}{4} = -8$

$$4 \times \frac{n}{4} = -8 \times 4$$

$$n = -32$$

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

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

$$\frac{m}{3} = 5$$

$$3 \times \frac{m}{3} = 5 \times 3$$

$$m = 15$$

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

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

$$b = -18$$

d)  $\frac{f}{-8} + 8 = 12$

$$\frac{f}{-8} + 8 - 8 = 12 - 8$$

$$\frac{f}{-8} = 4$$

$$-8 \times \frac{f}{-8} = 4 \times -8$$

$$f = -32$$

6)  $\frac{n}{-7} = 4$

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

$$n = -28$$

b)  $\frac{p}{9} = -3$

$$-9 \times \frac{p}{9} = -3 \times -9$$

$$p = 27$$

c)  $\frac{n}{2} + 5 = 0$

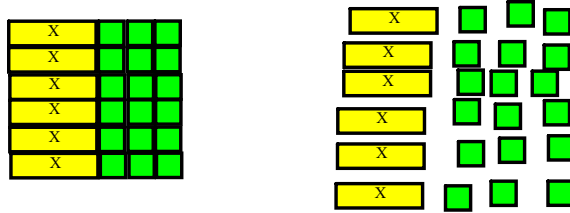
$$\frac{n}{2} + 5 - 5 = 0 - 5$$

$$\frac{n}{2} = -5$$

$$-2 \times \frac{n}{2} = -5 \times -2$$

$$n = 10$$

$$7. 6(a+3) = 18+6a$$



8. orally

$$\begin{aligned} 9 \text{ a) } 3(x+2) &= 21 \\ 3x+6 &= 21 \\ 3x+6-6 &= 21-6 \\ 3x &= 15 \\ \frac{3x}{3} &= \frac{15}{3} \\ x &= 5 \end{aligned}$$

verify

$$\begin{aligned} \text{b) } 4(p-3) &= 16 \\ 4p-12 &= 16 \\ 4p-12+12 &= 16+12 \\ 4p &= 28 \\ \frac{4p}{4} &= \frac{28}{4} \\ p &= 7 \end{aligned}$$

$$\begin{aligned} \text{c) } -5(r+4) &= -15 \\ -5r-20 &= -15 \\ -5r-20+20 &= -15+20 \\ -5r &= 5 \\ \frac{-5r}{-5} &= \frac{5}{-5} \\ r &= -1 \end{aligned}$$

$$\begin{aligned} \text{d) } 6(-5-3) &= 24 \\ -65-18 &= 24 \\ -65-18+18 &= 24+18 \\ -65 &= 42 \\ \frac{-65}{-6} &= \frac{42}{-6} \\ s &= -7 \end{aligned}$$

10.  $s =$  number of points

$$\begin{aligned}2(s+6) &= 26 \\2s+12 &= 26 \\2s+12-12 &= 26-12 \\2s &= 14 \\\frac{2s}{2} &= \frac{14}{2} \\s &= 7\end{aligned}$$

He started with  
7 points.

LS	RS
$2(s+6)$	$26$
$2(7+6)$	
$2 \times 13$	
$26$	

## Attachments

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Extra Practice 5 Solve equation using distributive prop.pdf