Warm Up Grade 8

April 11, 2014

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?

let x represent how many calls of text made.

$$C = 0.05x + 20$$

$$\$80.20 = 0.05x + 20$$

$$80.20 - 20 = 0.05x + 20 - 20$$

$$\$60.20 = 0.05x$$

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

$$1204 = x$$

Sally made 1204 calls or text

LHS

$80.20

RHS

$0.05x + 20$

$0.05(1204) + 20$

$\$60.20 + 20$

$\$80.20$

Same

Key words

for each
for every
per
/

} mean that # goes with the varible (infront of letter)

pg 347

10. c = cost of ticket

$ct6$ = cost for each person

$8(ct6) = 264$

$8c + 48 = 264$

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

$8c = 216$

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

$c = 27$

Cost of red ticket was $27

LS: $8(ct6)$, $8(27+6)$, 8×33, 264

RS: 264

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

LS: $-5(n+9)$, $-5(-12+9)$, -5×-3, 15

RS: 15

12. n = the integer

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

$-4n+28 = 36$

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

$-4n = 8$

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

$n = -2$

LS: $-4(n-7)$, $-4(-2-7)$, -4×-9, 36

RS: 36

The integer was -2.

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

$-8x = -16$

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

$x = 2$

14a) $-10 = 5(t-2)$

$-10 = 5t - 10$

$-10+10 = 5t - 10+10$

$0 = 5t$

$\frac{0}{5} = \frac{5t}{5}$

$0 = t$

LS: -10

RS: $5(t-2)$, $5(0-2)$, 5×-2, -10

b) $7 = 2(p-3)$

$7 = 2p - 6$

$7+6 = 2p - 6+6$

$13 = 2p$

$\frac{13}{2} = \frac{2p}{2}$

$6.5 = p$

LS: 7

RS: $2(p-3)$, $2(6.5-3)$, 2×3.5, 7

c) $4(r+5) = 23$

$4r + 20 = 23$

$4r + 20 - 20 = 23 - 20$

$4r = 3$

$\frac{4r}{4} = \frac{3}{4}$

$r = \frac{3}{4}$

LS: $4(r+5)$, $4(0.75+5)$, 4×5.75, 23

RS: 23

d) $-3(s+6) = 18$

$-3s - 18 = 18$

$-3s - 18 + 18 = 18 + 18$

$-3s = 36$

$\frac{-3s}{-3} = \frac{36}{-3}$

$s = -12$

LS: $-3(s+6)$, $-3(-12+6)$, -3×-6, 18

RS: 18

Sheet Ex Prac 5

$125(a+2) = -5$

$5a + 10 = -5$

$5a + 10 - 10 = -5 - 10$

$5a = -15$

$\frac{5a}{5} = \frac{-15}{5}$

$a = -3$

verify

LS: $5(a+2)$, $5(-3+2)$, 5×-1, -5

RS: -5

b) $4(p-6) = -4$

$4p - 24 = -4$

$4p - 24 + 24 = -4 + 24$

$4p = 20$

$\frac{4p}{4} = \frac{20}{4}$

$p = 5$

LS: $4(p-6)$, $4(5-6)$, 4×-1, -4

RS: -4

c) $10(y+3) = 10$

$10y + 30 = 10$

$10y + 30 - 30 = 10 - 30$

$10y = -20$

$\frac{10y}{10} = \frac{-20}{10}$

$y = -2$

LS: $10(y+3)$, $10(-2+3)$, 10×1, 10

RS: 10

d) $7(r-6) = 7$

$7r - 42 = 7$

$7r - 42 + 42 = 7 + 42$

$7r = 49$

$\frac{7r}{7} = \frac{49}{7}$

$r = 7$

LS: $7(r-6)$, $7(7-6)$, 7×1, 7

RS: 7

a) $-7(b+6)=-84$

$-7b-42=-84$

$-7b-42+42=-84+42$

$-7b=-42$

$\frac{-7b}{-7}=\frac{-42}{-7}$

$b=+6$

LS

$-7(b+6)$

$-7(6+6)$

-7×12

-84

RS

-84

b) $-5(q-11)=70$

$-5q+55=70$

$-5q+55-55=70-55$

$-5q=15$

$\frac{-5q}{-5}=\frac{15}{-5}$

$q=-3$

LS

$-5(q-11)$

$-5(-3-11)$

-5×-14

70

RS

70

c) $-9(d-3)=-45$

$-9d+27=-45$

$-9d+27-27=-45-27$

$-9d=-72$

$\frac{-9d}{-9}=\frac{-72}{-9}$

$d=+8$

LS

$-9(d-3)$

$-9(8-3)$

-9×5

-45

RS

-45

d) $-6(f-5)=36$

$-6f+30=36$

$-6f+30-30=36-30$

$-6f=6$

$\frac{-6f}{-6}=\frac{6}{-6}$

$f=-1$

3 p = price of voucher

$5(8+p)=55$

$40+5p=55$

$40+5p-40=55-40$

$5p=15$

$\frac{5p}{5}=\frac{15}{5}$

$p=3$

The ice cream voucher was $3

LS
$5(8+p)$
$5(8+3)$
5×11
55

RS
55

4.

m = length of plot

$m+12+m+12=54$

$2m+24=54$

$2m+24-24=54-24$

$2m=30$

$\frac{2m}{2}=\frac{30}{2}$

$m=15$

The length is 15m.

$2(m+12)=54$

LS
$m+12+m+12$
$15+12+15+12$
54

RS
54

5. n = the number

$-4(n+9) = -16$

$-4n + -36 = -16$

$-4n + \cdot 36 - (-36) = -16 - (-36)$

$-4n = 20$

$\frac{-4n}{-4} = \frac{20}{-4}$

$n = -5$

The integer was -5

$-4n - 36 = -16$

$-4n - 36 + 36 = -16 + 36$

$-4n = 20$

LS

$-4(n+9)$

$-4(-5+9)$

-4×4

-16

RS

-16

Class/Homework

Test Tomorrow

page 350

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

model only 1c

Test outline

5 MC

Ex) $3x-7=-1$

6 Short Response

#1 Draw tiles and solve an equation

#2 Use Algebra tiles or box method to prove distributive property

#3For each problem, state **the variable, write and solve the equation and give a statement.** (Like warm up)

#4 Solve Ex) $2(x-3)=16$

#5 For each of the following tell whether the pair of expressions is equivalent or not.

#6 (Is it correct if yes then verify if no then redo)

#6)

$3(x-2) = 27$

$3x - 6 = 27$

$3x - 6^{+6} = 27$

Mistake is her ⇒ did not add 6 to both side

Is there a mistake?

If yes, where?

If no verify.

$\frac{3x}{3} = \frac{27}{3}$

$x = 9$

b) Fix the error

$3(x-2) = 27$

Mrs. O'Keefe sell sour soothers for $0.50 per soother. She bought the soothers for $16. Made a Profit of $14, how many soother did she sell?

let s represent # of soothers sold.

$P = 0.50s - 16$

$14 = 0.50s - 16$

$14^{+16} = 0.50s - 16^{+16}$

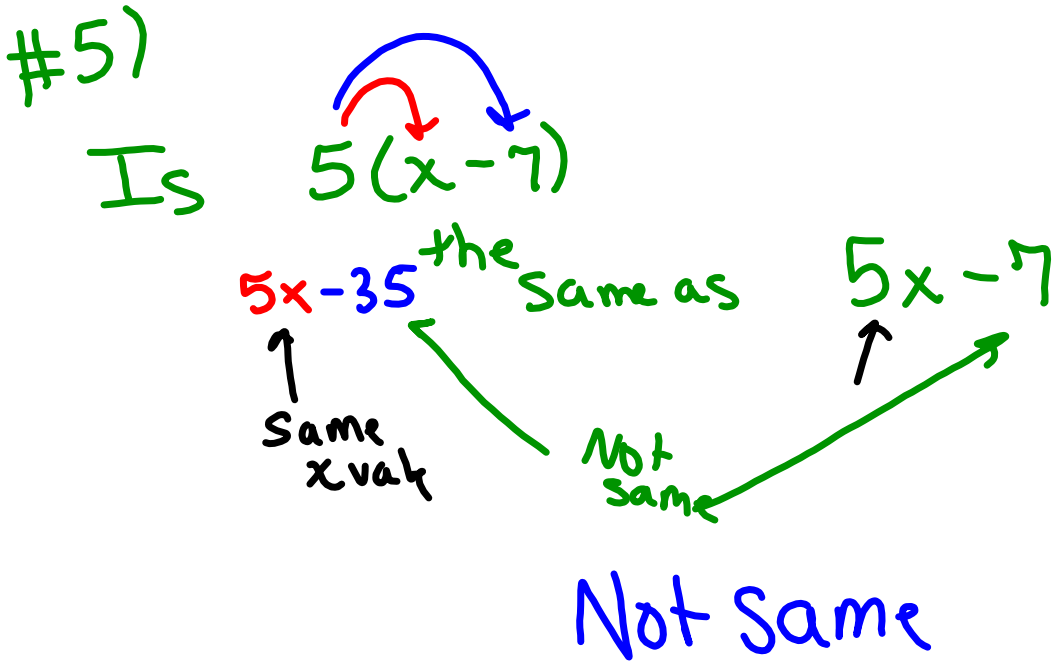
$\frac{30}{0.5} = \frac{0.50s}{0.5}$

$60 = s$

She sold 60 soothers

IDK how to do any of it

#5)



Not Same

#4

Solve

$$2(x-3) = 16$$

$$2x - 6 \overset{+6}{} = 16 \overset{+6}{}$$

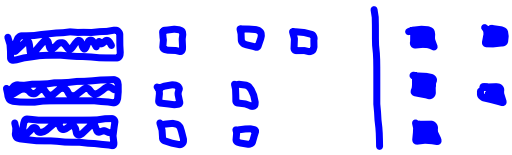
$$\frac{2x}{2} = \frac{22}{2}$$

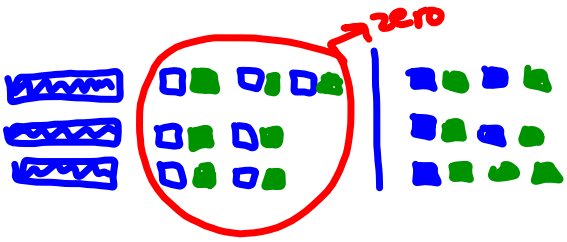
$$\boxed{x = 11}$$

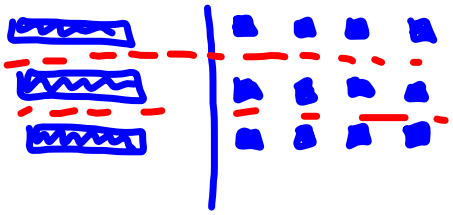
Draw tiles

1 Model and solve

$3x - 7 = 5$







$3x - 7 + 7 = 5 + 7$

$3x = 12$

$\div 3 \qquad \div 3$

$x = 4$

2) Model

$2(x+3)$

2 groups of $x+3$

E) Algebra

$3(x+1)$

$3x+3$