Homework review – 1.3 & 1.4

(27) $9\ \text{yds} \cdot \frac{3\ \text{ft}}{1\ \text{yd}} \cdot \frac{\$2}{1\ \text{ft}} = \frac{\$54}{\text{ft}}$

(24) $2.4\ \frac{\text{runs}}{\text{inning}}$

(21) $\frac{r}{3} - 4 = 4 \quad (r = 12)$

$\frac{12}{3} - 4 = 4$

$4 - 4 = 4$

$0 = 4$ X

(24) $y - 3.5 < 6 \quad (y = 9)$

$9 - 3.5 < 6$

$5.5 < 6$ ✓

(27) $4z - 5 < 3 \quad (z = 2)$

$4(2) - 5 < 3$

$8 - 5 < 3$

$3 < 3$ X

(43)

4 → people

x → amount of $

$25 per person

$4 \cdot \$25 = x$

$\$100 = x$

Solving equations:

- Finds the value of a variable in a particular circumstance
- Any mathematical operation ($+, -, \times, \div \ldots$) can be done to both sides of an equation and the equation will still be true

$5 + x = 31$ 26

-11

$5 + x = 42$ 37

-42

$5 + x = 0$ -5

$x = 5$ 5

$4+5=9$

$6(4+5)=6\cdot 9$

$6(4+5)+4=6\cdot 9+4$

$24+30+4=54+4$

$58=58$ ✓

$4+5=9$

-5

$4=9$ ×

$\frac{5a}{5} = \frac{10}{5}$

$a = 2$

$x + 2 = 14$

$-2 \quad -2$

$x = 12$

$x - 1 = 11$

$+1 \quad +1$

$x = 12$

$5 \cdot \frac{y}{5} = 12 \cdot 5$

$y = 60$

Solve the equation.

1. $x + 16 = 25$

$x = 9$

2. $n - 9 = 17$

$+9 \quad +9$

$n = 26$

3. $-30 = w + 8$

$w = -38$

4. $y + 5 = -13$

$y = -18$

5. $a - 17 = -10$

$a = 7$

6. $41 = 52 + m$

$-52 \quad -52$

$-11 = m$

$$5a+6=31$$
$$-6 \quad -6$$
$$\frac{5a}{5}=\frac{25}{5}$$
$$a=5$$

Paren.
Exp.
Div/mult.
Sub/add.

Solve the equation.

1. $3n + 14 = 35$

$-14 \quad -14$

$\frac{3n}{3} = \frac{21}{3}$

$n = 7$

2. $7y - 10 = 11$

$y = 3$

3. $14 = 9 - x$

$-9 \quad -9$

$-1 \cdot 5 = -x \cdot -1$

$-5 = x$

4. $9c - 5 = 13$

$c = 2$

5. $4.6 = 4m - 3.4$

$m = 2$

6. $1.2 = 2.4 - 3b$

$b = 0.4$

$1.2 = 2.4 - 3b$

$-2.4 \quad -2.4$

$\frac{-1.2}{-3} = \frac{-3b}{-3}$

22. Swimming Pool The capacity of a small children's swimming pool is 106 gallons of water. There are currently 15 gallons of water in the pool. You are filling the pool with water at a rate of 2 gallons per minute.

a. Write an equation that gives the amount y (in gallons) of water in the pool as a function of the number x of minutes from now.

$y = 15 + x2$

capacity = 106 gallons
currently = 15 gallons
rate = $\frac{2 \text{ gallons}}{\text{min}}$

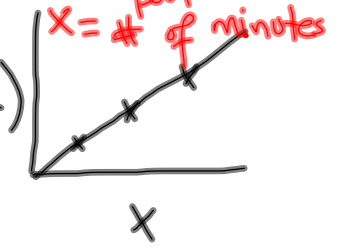
y = how many gallons in the pool
x = # of minutes

$y = 2x + 15$

b. After how many minutes will the pool be full?

$106 = 2x + 15$
$-15 \quad -15$
$91 = 2x$
$x = 45.5$

$f(x) = \frac{}{x}$



amount of water = amount we started w/ + however much we added since then

m	g
1	2
2	4
3	6
⋮	⋮

Homework:

p. 138, 18-48 by 3, 54

p. 144, 3-33 by 3, 38-44 even