

Solving Equations: Practice

- 1.
- Inverse of Addition & subtraction = _____
 - Inverse of Multiplication & Division = _____

2. Show your understanding of the rules above by solving the equations below:

a. $3x + 4 = 22$

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

3.

a. $\frac{x}{20} - \frac{1}{5} = \frac{3}{5}$

b. $\frac{x-6}{4} = -14$

Solving Equations: Practice Cont.

4. Why is it said that an equation is like a balance scale?

5. Use the Addition property of Equality:

a. $x - 6 = 4$

b. $x - 12 = 8$

c. $x + 9 = 13$

6. Use the Multiplication Property of Equality:

a. $\frac{n}{6} = 8$

b. $8k = 64$

c. $\frac{x}{36} = -2$

Solving Equations: Practice cont.

7. Solve the following multi step equations:

a. $-2(3x+4)=40$ b. $4(2x-8)=16$ c. $\frac{b}{4} + \frac{1}{6} = 18$

d. $5x - 14 + 6x = 8$

8. Solve the following equations:

a. $6h = 2h + 17$ b. $4 - 8x + 7x = -3 + 3(1-x)$

Solving Equations: Practice Cont.

8 cont.

c. $x + 3 - 5x = 1 - 6x + 2x + 2$ ~~XXXXXXXXXX~~

d. $-5x + 8 + 6x = -22 + x$

9. Solve for a variable

a. solve for y: $6x + 8y = 88$

b. solve for x: $5y + 20x = 60$

Solving Equations: Practice cont.

10. Write the ratio of a and b in 3 ways:

1. _____ 2. _____ 3. _____

11. If Sarah can eat 246.6 Hershey Kisses in 14 minutes, how many can she eat in one minute?

12. Convert minutes to hours:

a. $260 \text{ min} =$ _____ b. $480 \text{ min} =$ _____

Solving Equations: Practice Cont.

13. Solve:

a. $\frac{4}{6} = \frac{n}{12}$ b. $\frac{x-6}{2} = \frac{x+8}{5}$ c. $\frac{5}{8} = \frac{k}{16}$

14. There are 39g of sugar in a 2oz can of soda. How many g of sugar would there be in a 16oz bottle?

15. What percent of 75 is 5?

Solving Equations: Answer Key

1. First
Later

2. a. $3x + 4 = 22$
 $-4 \quad -4$

$3x = 18$

$x = 6$

3. a. $\frac{x}{20} - \frac{1}{5} = \frac{3}{5}$
 $+\frac{1}{5} \quad +\frac{1}{5}$

(20) $\frac{x}{20} = \frac{4}{5} (20)$

$x = 16$

7. a. $x = -8$ b. $x = 6$

c. $x = 71.3\bar{3}$ d. $x = 2$

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

$8 \cdot \frac{n}{8} = 9 \cdot 8$

$n = 72$

4. b. $\frac{x-6}{4} = -14 \cdot 4$

$x - 6 = -56$
 $+6 \quad +6$

$x = -50$

8. a. $h = \frac{17}{4}$

b. $x = -2$

d. ~~no solution~~ $x =$ infinite

a. $y = 11 - \frac{3}{4}x$

b. $x = 3 - \frac{1}{4}y$

10. a to b, a:b, $\frac{a}{b}$

11. 17.6 Kisses

12. a. 4.3 b. 8 hr

13. a. $n = 8$ b. $k = 10$

b. $x = 15.3\bar{3}$

14. ~~52~~

15. 6.6%

4. to keep it balanced, you have to perform the same operations to both sides.

5. a. $x = 10$ b. $x = 20$ c. $x = 4$

6. a. $n = 48$ b. $k = 8$ c. $x = -72$