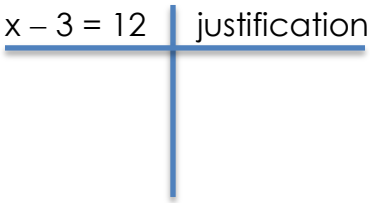
Name _____ Date _____ Period _____

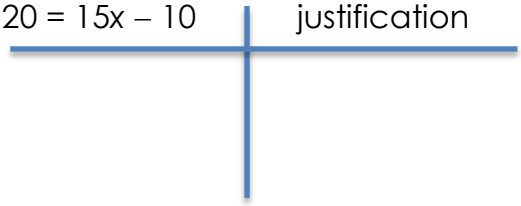
1.5 Justifying Equations and Literal Equations

Solve each equation. Show all steps and justify only using properties of equality and distributive property.

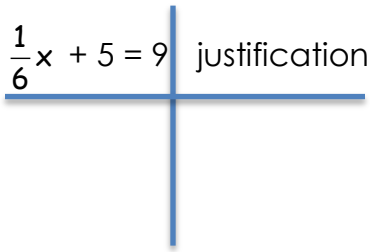
1. $x - 3 = 12$ | justification



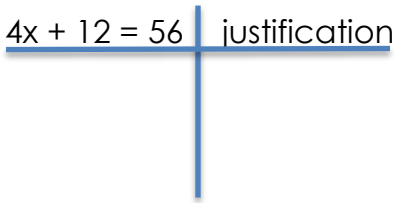
2. $20 = 15x - 10$ | justification



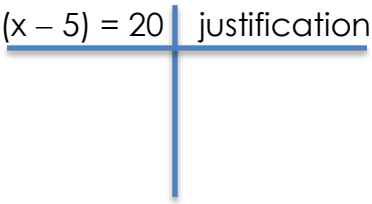
3. $\frac{1}{6}x + 5 = 9$ | justification



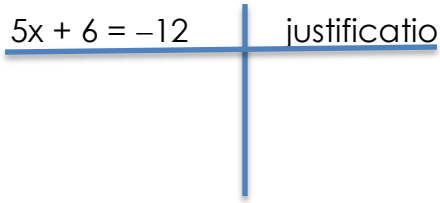
4. $4x + 12 = 56$ | justification



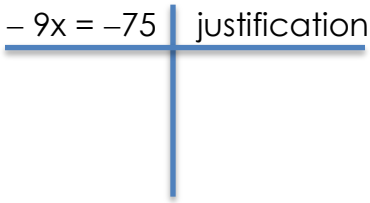
5. $2(x - 5) = 20$ | justification



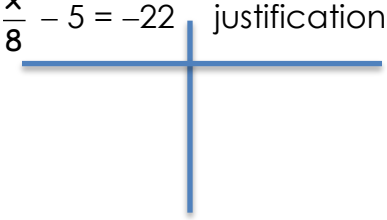
6 $5x + 6 = -12$ | justification



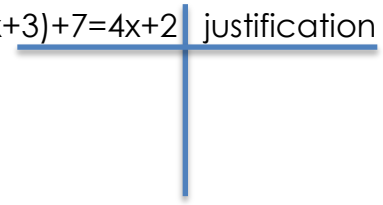
7. $6 - 9x = -75$ | justification



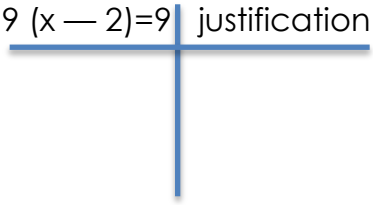
8. $\frac{x}{8} - 5 = -22$ | justification



9. $(2x+3)+7=4x+2$ | justification



10. $9\ (x - 2)=9$ | justification



Write an equation for the following statements, then solve and justify.

11. Seven more than twice a number is negative 53.

12. Friday's temperature was 20° warmer than Monday's temperature, t. Write an expression for Friday's temperature.

Solve each of the following equations and literal equations:

13a) $14 = 2x + 26$

13b) Solve for v: $3d = 7v + 5$

14a) $-30 = 4 - 8x$

14b) Solve for h: $7a = 10 - 2h$

15a) $3(x - 4) = 12$

15b) Solve for p: $5(4x + p) = w$

16a) $\frac{x}{-8} = 11$

16b) Solve for y: $\frac{y}{3} = h$

17. Which of the following is equivalent to:

$7a - 8b = 10x$

A. $a = \frac{18xb}{7}$

B. $a = \frac{10x + 8b}{7}$

C. $a = \frac{10x - 8b}{7}$

18. Which of the following is equivalent to:

$4ab + k = 13$

A. $k = \frac{13}{4ab}$

B. $k = \frac{13 - ab}{4}$

C. $k = 13 - 4ab$