

Name _____

Solve the problem.

- 1) The formula $C = 25d + 30$ describes the total cost of renting a truck, where C is the total cost and d is the number of days the truck is rented. How many days can the truck be rented for \$355?

Determine whether the equation has no solution, one solution, or infinitely many solutions.

2) $7(x + 6) = 7x + 42$

3) $\frac{1}{4}a - \frac{1}{4} = -5$

4) $-6 + 6(2x - 5) = -20x - 4x$

Solve the formula for the specified variable.

5) $S = 2\pi rh + 2\pi r^2$ for h

6) $P = 2L + 2W$ for L

Solve the problem.

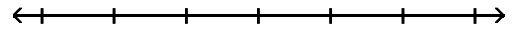
- 7) How many liters of a 10% alcohol solution must be mixed with 60 liters of a 80% solution to get a 20% solution?
- 8) A college student earned \$6000 during summer vacation working as a waiter in a popular restaurant. The student invested part of the money at 10% and the rest at 8%. If the student received a total of \$546 in interest at the end of the year, how much was invested at 10%?

Write the solution set to the inequality in interval notation.

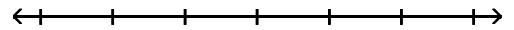
9) $x \geq 5$

Solve and graph. Write the answer in interval notation.

10) $5n - 4 > 4n - 15$



11) $-7x > 6$



12) $x - \frac{1}{7} > -\frac{4}{7}$

**Solve the inequality. Write the answer in interval notation.**

13) $\frac{x}{2} + 2 \leq 7$

14) $\frac{8}{45}(x + 1) > \frac{1}{9}(x + 5)$

15) $\frac{2}{5}(7x - 5) - \frac{3}{4} < \frac{1}{4}$

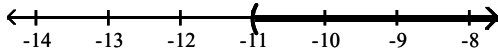
Solve the problem.

- 16) Jon has 855 points in his math class. He must have 76% of the 1200 points possible by the end of the term to receive credit for the class. What is the minimum number of additional points he must earn by the end of the term to receive credit for the class?

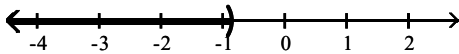
Answer Key

Testname: WKS_9.1_9.2_9.3

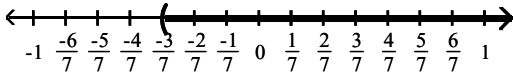
- 1) 13 days
- 2) Infinitely many solutions
- 3) -19
- 4) 1
- 5) $h = \frac{S - 2\pi r^2}{2\pi r}$
- 6) $L = \frac{P - 2W}{2}$
- 7) 360 L
- 8) \$3300
- 9) $[5, \infty)$
- 10) $\{n \mid n > -11\}$



11) $\left\{x \mid x < -\frac{6}{7}\right\}$



12) $\left\{x \mid x > -\frac{3}{7}\right\}$



13) $\{x \mid x \leq 10\}$

14) $\left\{x \mid x > \frac{17}{3}\right\}$

15) $\left\{x \mid x < \frac{15}{14}\right\}$

16) 57 points