

Practice 9.2 & 9.3

Name _____

Solve the problem.

- 1) How many liters of a 10% alcohol solution must be mixed with 50 liters of a 70% solution to get a 60% solution?
- 2) A college student earned \$6200 during summer vacation working as a waiter in a popular restaurant. The student invested part of the money at 9% and the rest at 6%. If the student received a total of \$441 in interest at the end of the year, how much was invested at 9%?

$$9) x + \frac{5}{21} > \frac{20}{21}$$

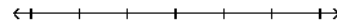


$$10) -4x > -10$$

Write the solution set to the inequality in interval notation.

$$3) x \geq 7$$

$$4) x < 5$$



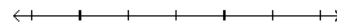
$$11) 13n + 9 > 12n + 3$$

Determine whether the given value is a solution of the inequality.

$$5) 4 + x \leq 10, x = 6$$

$$6) -4x \geq 10, x = \frac{9}{2}$$

$$7) \frac{2}{5}x - \frac{1}{3} \leq x + \frac{1}{10}, x = \frac{1}{2}$$



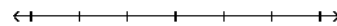
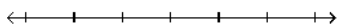
$$12) x - \frac{2}{21} > -\frac{8}{21}$$



Solve and graph. Write the answer in interval notation.

$$8) 11n - 5 > 10n - 13$$

$$13) -7x > 15$$



Solve the inequality. Write the answer in interval notation.

$$14) \frac{x}{2} + 13 \leq 10$$

$$15) \frac{4}{15}(x + 2) > \frac{1}{6}(x + 5)$$

$$16) \frac{2}{7}(2x - 5) - \frac{3}{4} < \frac{1}{4}$$

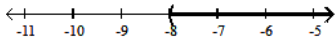
Solve the problem.

- 17) Jon has 758 points in his math class. He must have 62% of the 1400 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?

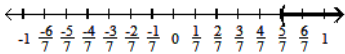
Answer Key

Testname: WKS_9.2_9.3

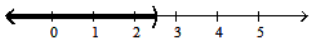
- 1) 10 L
- 2) \$2300
- 3) $[7, \infty)$
- 4) $(-\infty, 5)$
- 5) Yes
- 6) No
- 7) No
- 8) $\{n \mid n > -8\}$



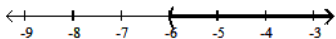
9) $\left\{x \mid x > \frac{5}{7}\right\}$ or $\left(\frac{5}{7}, \infty\right)$



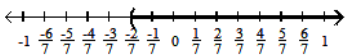
10) $\left\{x \mid x < \frac{5}{2}\right\}$ or $\left(-\infty, \frac{5}{2}\right)$



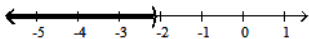
11) $\{n \mid n > -6\}$ or $(-6, \infty)$



12) $\left\{x \mid x > -\frac{2}{7}\right\}$ or $\left(-\frac{2}{7}, \infty\right)$



13) $\left\{x \mid x < -\frac{15}{7}\right\}$ or $\left(-\infty, -\frac{15}{7}\right)$



14) $\{x \mid x \leq -6\}$ or $(-\infty, -6]$

15) $\{x \mid x > 3\}$ or $(3, \infty)$

16) $\left\{x \mid x < \frac{17}{4}\right\}$ or $\left(-\infty, \frac{17}{4}\right)$

17) 110 points