

Name

key

Date Due

7th Grade MATH STUDY GUIDE Ch 8 Equations

Complete the work inside the boxes under the problem. Circle your answer.

1. Translate.

Twelve more than eight times a number is sixty

$$8n + 12 = 60$$

2. Translate.

The difference between ten and three times a number is 31.

$$10 - 3n = 31$$

3. Translate.

The sum of 5 times and number and 7 is -45.

$$5n + 7 = -45$$

4. Solve.

$$3r = 351$$

$$\frac{3r}{3} = \frac{351}{3}$$

$$r = 117$$

$$\begin{array}{r} 117 \\ 3 \overline{)351} \\ \underline{33} \phantom{0} \\ 21 \\ \underline{21} \\ 0 \end{array}$$

5. Solve.

$$\frac{5}{4} \cdot \frac{4}{5} g = \frac{5}{1} \cdot \frac{5}{4}$$

$$g = \frac{25}{1} = 25$$

6. Solve.

$$4x + 3 = 39$$

$$\frac{4x + 3}{-3} = \frac{39}{-3}$$

$$\frac{4x}{4} = \frac{36}{4}$$

$$x = 9$$

7. Solve.

$$\frac{1}{2} 2 = 2y + 54$$

$$\frac{-54}{-54} \quad \frac{-54}{-54}$$

$$78 = 2y$$

8. Solve.

$$8 = -12 - 2p$$

$$\frac{+12}{+12} \quad \frac{+12}{+12}$$

$$\frac{20}{-2} = \frac{-2p}{-8}$$

$$-10 = p$$

9. Solve.

$$-24 = 12(f + 1)$$

$$-24 = 12f + 12$$

$$\frac{+12}{+12} \quad \frac{-12}{-12}$$

$$\frac{-36}{12} = \frac{12f}{12}$$

$$-3 = f$$

10. Solve.

$$-8 = 4(n + 4)$$

$$-8 = 4n + 16$$

$$\frac{+16}{+16} \quad \frac{-16}{-16}$$

$$\frac{-24}{4} = \frac{4n}{4}$$

$$-6 = n$$

11. Solve and graph.

$$\frac{7m \leq -35}{7 \quad 7}$$

$$m \leq -5$$



12. Solve and graph.

$$\frac{7}{1} \cdot \frac{y}{7} < 2 \cdot 7$$

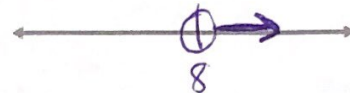
$$y < 14$$



13. Solve and graph.

$$\frac{70 + 7x > 14}{-70 \quad -70}$$

$$7x > 56$$
$$x > 8$$



14. Solve and graph.

$$\frac{-10g \leq 200}{-10 \quad -10} \text{ FLIP!}$$

$$g \leq -20$$



15. One cellular phone company charges \$26.50 plus \$0.15 per minute for local calls. Another company charges \$14.50 and \$0.25 per minute for local calls. For how many minutes is the cost of the plans the same?

$$26.50 + 0.15m = 14.50 + 0.25m$$

$$\begin{array}{r} 26.50 \\ -14.50 \\ \hline 12.00 \end{array} = \begin{array}{r} 14.50 + 0.25m \\ -0.15m \\ \hline 14.50 + 0.10m \\ -14.50 \\ \hline 0.10m \end{array}$$

$$\frac{12.00}{0.10} = \frac{0.10m}{0.10}$$

$$120 = m$$

\* Don't worry about #15. It won't be on the test.