

Rational Numbers and Coordinate Plane Study Guide ANSWERS

① $\frac{17}{25} = \frac{68}{100} = 0.68 = 68\%$ D → → P

② $\frac{-8}{11} = -0.\overline{72} = -72.\overline{72}\%$

$$\begin{array}{r} 0.7272 \\ 11 \overline{) 8.0000} \\ \underline{-77} \\ 30 \\ \underline{-22} \\ 80 \\ \underline{-77} \\ 30 \end{array}$$

③ $\frac{13}{15} = 0.8\overline{6} = 86.\overline{6}\%$

$$\begin{array}{r} 0.866 \\ 15 \overline{) 13.000} \\ \underline{-120} \\ 100 \\ \underline{-90} \\ 100 \\ \underline{-90} \\ 10 \end{array}$$

④ 52.920 larger in the 100^{ths} place value
 ↑
 52.902

⑤ $-8.6 = -8.600$

$-8.6, -8\frac{7}{12}, 8.\overline{4}, 8\frac{5}{9}$

$8\frac{5}{9} = 8.\overline{5}$

$-8\frac{7}{12} = -8.58\overline{3}$

$8.\overline{4} = 8.4$

$$\begin{array}{r} 0.583\overline{3} \\ 12 \overline{) 7.0000} \\ \underline{-60} \\ 100 \\ \underline{-96} \\ 40 \\ \underline{-36} \\ 40 \end{array}$$

$$\textcircled{6} \quad -4\frac{1}{4} = -4.25$$

$$|-4| = 4$$

$$-4\frac{3}{11} = -4.\overline{27}$$

$$-4.\overline{30} = -4.\overline{30}$$

$$\boxed{-4.\overline{30}, -4\frac{3}{11}, -4\frac{1}{4}, |-4|}$$

$$\textcircled{7} \quad 0.048 = \frac{48}{1000} \div 10 = \frac{4.8}{100} = \textcircled{4.8\%} \quad \text{OR} \quad 0.048 \xrightarrow{D \rightarrow P} \textcircled{4.8\%}$$

$$\hookrightarrow \frac{48}{1000} \div 8 = \frac{6}{125}$$

$$\textcircled{8} \quad -3.415 = -3 \frac{415}{1000} \stackrel{\div 5}{=} -3 \frac{83}{200} \stackrel{+}{=} -\frac{683}{200}$$

$$\textcircled{9} \quad 48\% = \frac{48}{100} = \textcircled{0.48}$$

$$\hookrightarrow \frac{48}{100} \div 4 = \frac{12}{25}$$

$$\textcircled{10} \quad 0.65\% \quad D \leftarrow \leftarrow P$$

$$\textcircled{.0065} = \frac{65}{10,000} \div 5 = \frac{13}{2000}$$

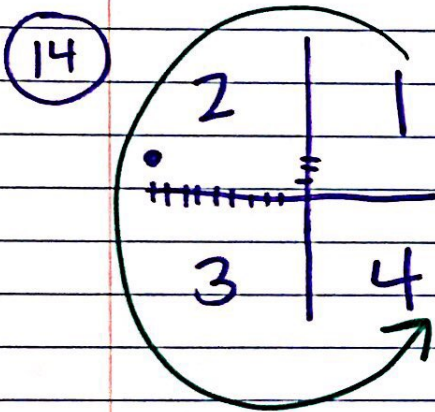
$$\textcircled{11} \quad 185\% = \frac{185}{100} = 1\frac{85}{100} = \textcircled{1.85}$$

$$\hookrightarrow 1\frac{85}{100} \div 5 = 1\frac{17}{20}$$

$$185\% \quad D \leftarrow \leftarrow P$$
$$\textcircled{1.85}$$

⑫ $(-7, 4)$
 $(-7, 9)$ $9 - 4 = 5$

⑬ $(5, -9)$
 $(5, 2)$ $2 - -9$
 $2 + 9 = 11$



⑮ - ⑰ see study guide

⑱ - ⑲ see study guide

⑳ - ㉒ see study guide

D: 0.68 P: 68% 1. Write $\frac{17}{25}$ as a decimal and a percent.

D: -0.72 P: -72.72% 2. Write $-\frac{8}{11}$ as a decimal and a percent.

D: 0.86 P: 86.6% 3. Jake won 13 of the 15 races he ran. Write Jake's fraction of wins as a decimal and a percent.

> 4. Use $<$, $>$ or $=$ to compare the rational numbers. 52.92 \bigcirc 52.902

_____ 5. Order -8.6 , $8\frac{5}{9}$, $-8\frac{7}{12}$, and $8.\bar{4}$ from least to greatest. $-8.6, -8\frac{7}{12}, 8.\bar{4}, 8\frac{5}{9}$

$-4.\bar{30}, -4\frac{3}{4}, -4\frac{1}{4}, |-4|$ 6. Order $-4\frac{1}{4}$, $|-4|$, $-4\frac{3}{11}$, $-4.\bar{30}$ from least to greatest.

F: $\frac{6}{125}$ P: 4.8% 7. Write 0.048 as a fraction in simplest form and a percent.

$-\frac{683}{200}$ 8. Write -3.415 as an **improper** fraction in simplest form.

F: $\frac{12}{25}$ D: 0.48 9. Write 48% as a fraction in simplest form and a decimal.

F: $\frac{13}{2000}$ D: .0065 10. Write 0.65% as a fraction in simplest form and a decimal.

F: $\frac{17}{20}$ D: 1.85 11. Write 185% as a fraction in simplest form and a decimal.

5 units 12. Find the distance between $(-7, 4)$ and $(-7, 9)$.

11 units 13. Find the distance between $(5, -9)$ and $(5, 2)$.

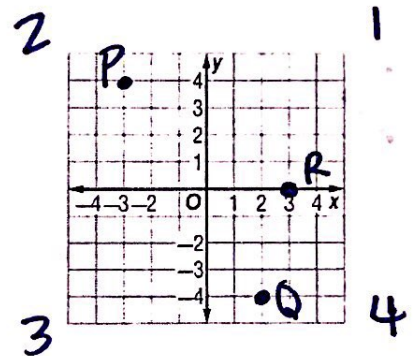
G 14. Which of the following correctly identifies the quadrant where the point named by $(-9, 3)$ is located?
F. Quadrant I H. Quadrant III
G. Quadrant II I. Quadrant IV

Graph each point on a coordinate plane to the right. (Write the letter beside the point on the coordinate plane.) Then identify which quadrant or axis the point is in/on.

15. $P(-3, 4)$, Quadrant 2

16. $Q(2, -4)$, Quadrant 4

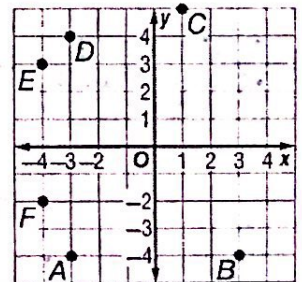
17. $R(3, 0)$, Quadrant x-axis



For Exercises 18-19, use the coordinate plane at the right.

E 18. Identify the point for the ordered pair $(-4, 3)$.

(-3, -4) 19. Write the ordered pair that names point A.



The coordinate plane at the right shows the location of the YMCA. For Exercises 20-22, you may graph on the coordinate plane, but write your ordered pair answers in the blank.

(-4, -4) 20. An oak tree is located at the reflection of point C across the y-axis. What ordered pair describes the location of the oak tree?

(1, 2) 21. A sprinkler is located at the reflection of point A across the x-axis. What ordered pair describes the location of the sprinkler?

(-4, -2) 22. A fire pit is located at the reflection of point B about the y-axis. What ordered pair describes the location of the fire pit?

