

Unit 7: Rational Numbers

ADVANCED · SET 2

Name: _____ Date: _____

Show all work. Write each answer as an exact value (integer, fraction like $\frac{3}{4}$, or coordinate pair like $(3, -4)$).

1. Evaluate: $|-18| - |7| + |-3|$. Give the exact value.

Answer: _____

3. A number line shows point P at -12 and point Q at 20. What is the coordinate of the midpoint between P and Q?

Answer: _____

5. For what value of x does $|x| = |-14|$ when x is negative? Give the exact value.

Answer: _____

7. At 6 a.m. the temperature was -9° . It rose 4° per hour for 5 hours, then dropped 7° . What was the final temperature in degrees? Give the exact value.

Answer: _____

9. Points C(-5, -2) and D(7, -2) lie in the coordinate plane. A point M is the midpoint of segment CD. What are the coordinates of M? Write as (x, y) .

Answer: _____

11. A submarine at -240 m rises $\frac{1}{3}$ of the way to the surface (0 m). What is its new depth in meters? Give the exact value (use a negative number).

Answer: _____

2. Point A is at $(-6, 4)$ and point B is at $(-6, -9)$ in the coordinate plane. What is the distance between A and B?

Answer: _____

4. Evaluate: $-15 + |-8| - (-11) - 6$. Give the exact value.

Answer: _____

6. A point is at $(8, -5)$. It is reflected across the x -axis, then that image is reflected across the y -axis. What are the coordinates of the final point? Write as (x, y) .

Answer: _____

8. Which is greater in absolute value: $-\frac{19}{4}$ or -4.6 ? Answer by writing the value with the larger absolute value exactly as shown.

Answer: _____

10. Evaluate: $|-2/3 - 5/6|$. Give the exact answer as a fraction.

Answer: _____