

Unit 7: Rational Numbers

ADVANCED

Name: _____ Date: _____

Show all work. Write each answer exactly as a number, fraction, or coordinate pair — no units unless asked.

1. Evaluate: $|-18| - |7| + |-4|$. Give the value.

Answer: _____

3. Point A is at $(-6, 4)$. Point B is the reflection of A across the x-axis, and point C is the reflection of B across the y-axis. Give the coordinates of C.

Answer: _____

5. Compute: $-5/6 + 3/4$. Give the answer as a fraction in lowest terms.

Answer: _____

7. The temperature was -7°C at 6 a.m. It rose 3° each hour for 5 hours, then fell 11° . What was the temperature after that? Give a signed number with no unit.

Answer: _____

9. Points P $(-8, -3)$ and Q $(-8, 9)$ lie in the coordinate plane. Give the length of segment PQ.

Answer: _____

11. Which is greater: $-|-9|$ or $-(-9)$? Write the greater value as a number.

Answer: _____

2. Order these from least to greatest and give the middle (6th of 11)... Actually, list the value that is the median of: $-3/4$, -0.8 , $-2/3$, $-5/6$, -0.7 . Write the median as a decimal.

Answer: _____

4. A diver is at -38 meters (relative to sea level). She rises 17 meters, then descends 24 meters. What is her final position relative to sea level? Give a signed number.

Answer: _____

6. On a number line, how far apart are the points $-12\frac{3}{4}$ and $8\frac{1}{2}$? Give the distance as a mixed number.

Answer: _____

8. For what value of x is $|x + 5| = 12$ and x is negative? Give x.

Answer: _____

10. Evaluate: $(-2/3) \times (-9/4) \div (-3/8)$. Give the answer as a fraction in lowest terms.

Answer: _____

12. A rectangle has vertices $(-5, 2)$, $(7, 2)$, $(7, -6)$, and $(-5, -6)$. Give its perimeter.

Answer: _____