1. The point $(-4, 3)$ is in which quadrant?

   ☐ I

   ☐ II

   ☐ IV

   ☐ III

2. Extended: Find the gradient of the line through (1, 2) and (4, 11).

   _____

3. Find the length of the segment from (1, 2) to (4, 6).

   _____

4. Extended: Rearrange $5x + 4y = 8$ into $y = mx + c$. What is c (the y-intercept)?

   _____

5. A line is parallel to $y = 4x - 1$ and passes through $(1, -3)$. In $y = 4x + c$, what is c?

   _____

6. The point where the $x$-axis and $y$-axis cross is called the _____.

   _____

7. A line that goes down as you move to the right has a gradient that is:

   ☐ negative

   ☐ positive

   ☐ zero

   ☐ undefined

8. The midpoint of (1, 2) and (4, 6) is (a, 4). What is a?

   _____

9. In $y = mx + c$, the letter m stands for the:

   ☐ x-value

   ☐ midpoint

   ☐ y-intercept

   ☐ gradient



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☐ 2/3

☐ 3/2

☐ −2/3

☐ −3/2

1. **II**

   Negative $x$ (left) and positive $y$ (up) → quadrant II (top-left).

2. **3**

   $(11 - 2)/(4 - 1) = 9/3 = 3$.

3. **5**

   $\sqrt{((4-1)^2 + (6-2)^2)} = \sqrt{(9 + 16)} = \sqrt{25} = 5$.

4. **2**

   4y = −5x + 8, so y = −(5/4)x + 2; the intercept is 2.

5. **-7**

   Parallel → same gradient 4. $-3 = 4(1) + c$, so $c = -7$.

6. **origin**

   The origin is the point $(0, 0)$ where the two axes meet.

7. **negative**

   Falling to the right means the change in y is negative for a positive change in x, so the gradient is negative.

8. **2.5**

   Average the x-values: $(1 + 4)/2 = 2.5$.

9. **gradient**

   m is the gradient (steepness); c is the y-intercept.

10. **−2/3**

    Flip and change sign: perpendicular gradient = $-1 \div (3/2) = -2/3$.



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