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NOTE

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Practice quiz on the Cartesian Plane

TOTAL DES POINTS 5

1. Which of the following points in the Cartesian Plane is on the y -axis?

1 / 1 point

- ☐ (5, 0)
- ☒ (0, -5)
- ☐ (-5, 0)
- ☐ (1, 1)



Correct

The y -axis is defined to be all points in the Cartesian plane with zero as x -coordinate. The point (0, -5) meets that requirement.

2. Find the distance between the points $A = (2, 2)$ and $C = (3, 3)$:

1 / 1 point

- ☐ 2
- ☐ 1
- ☒ $\sqrt{2}$
- ☐ 0



Correct

Recall that the distance between points (a, b) and (c, d) is $\sqrt{(c-a)^2 + (d-b)^2}$.

In this case $(a, b) = (2, 2)$ and $(c, d) = (3, 3)$, so the distance is $\sqrt{(3-2)^2 + (3-2)^2} = \sqrt{2}$.

3. Find the point-slope form of the equation of the line that goes between $A = (1, 1)$ and $B = (5, 3)$:

1 / 1 point

- ☐ $y - 1 = \frac{1}{2}(x - 5)$
- ☐ $y - 3 = \frac{1}{2}(x - 1)$
- ☒ $y - 1 = \frac{1}{2}(x - 1)$
- ☐ $y = \frac{1}{2}x$



Correct

The point-slope form for the equation of a line with slope m that goes through the point (x_0, y_0) is $y - y_0 = m(x - x_0)$

In this case, the slope $m = \frac{3-1}{5-1} = \frac{1}{2}$

We can choose either A or B for the point on the line, but in neither case do we get this chosen answer.

4. Which of the following points is on the line with equation:

0 / 1 point

$$y - 1 = 2(x - 2)?$$

- ☐ (2, 1)
- ☒ (3, 2)
- ☐ (2, 3)
- ☐ (0, 0)

! Incorrect

If we plug in 2 for y and 3 for x in the equation of the line, we make a false statement, so the point does not lie on the line.

5. Suppose that a line ℓ has slope 2 and goes through the point $(-1, 0)$. What is the y -intercept of ℓ ?

1 / 1 point

- ☐ 1
- ☐ -1
- ☒ 2
- ☐ 0

✓ Correct

Recall that the y -intercept of ℓ is the y -coordinate of where ℓ hits the y -axis.

Since $(-1, 0) \in \ell$, the point on ℓ with $x = 0$ is obtained by running one unit from $(-1, 0)$ while rising two units.

This gives $y = 2$ as the y -intercept.