Practice quiz on the Cartesian Plane

TOTAL POINTS 5

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

- ○ $(1, 1)$
- ◉ $(0, -5)$
- ○ $(-5, 0)$
- ○ $(5, 0)$

> ✓ **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
- ○ 0
- ◉ $\sqrt{2}$

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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`

- ○ $y = \frac{1}{2} x$
- ◉ $y - 1 = \frac{1}{2}(x - 1)$
- ○ $y - 3 = \frac{1}{2}(x - 1)$
- ○ $y - 1 = \frac{1}{2}(x - 5)$

> ✓ **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: `1 / 1 point`

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

- ○ $(2, 3)$
- ○ $(0, 0)$
- ◉ $(2, 1)$
- ○ $(3, 2)$

> ✓ **Correct**
> If we plug in 1 for y and 2 for x in the equation of the line, we make a true statement, 0 = 0, so this point lies 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`

- ○ 0
- ○ 1
- ◉ 2
- ○ -1

> ✓ **Correct**
> Recall that the y-intercept of ℓ is the y-coordinate of where ℓ hits the y-