

1. 060528a, P.I. G.G.63

Which equation represents a line that is perpendicular to the line whose equation is $-2y = 3x + 7$?

[A] $y = \frac{3}{2}x - 3$ [B] $y = \frac{2}{3}x - 3$

[C] $2y = 3x - 3$ [D] $y = x + 7$

2. 080630a, P.I. G.G.63

Which line is perpendicular to the line whose equation is $5y + 6 = -3x$?

[A] $y = -\frac{5}{3}x + 7$ [B] $y = \frac{3}{5}x + 7$

[C] $y = -\frac{3}{5}x + 7$ [D] $y = \frac{5}{3}x + 7$

3. fall9925b, P.I. G.G.63

Given two lines whose equations are $3x + y - 8 = 0$ and $-2x + by + 9 = 0$, determine the value of b such that the two lines will be perpendicular.

4. 010834a, P.I. G.G.64

Write an equation of a line that is perpendicular to the line $y = \frac{2}{3}x + 5$ and that passes through the point $(0,4)$.

5. 080130a, P.I. G.G.63

Shanaya graphed the line represented by the equation $y = x - 6$. Write an equation for a line that is parallel to the given line. Write an equation for a line that is perpendicular to the given line. Write an equation for a line that is identical to the given line but has different coefficients.

6. 060722a, P.I. G.G.63

Which statement describes the lines whose equations are $y = \frac{1}{3}x + 12$ and $6y = 2x + 6$?

[A] They are parallel to each other.

[B] They intersect each other.

[C] They are segments.

[D] They are perpendicular to each other.

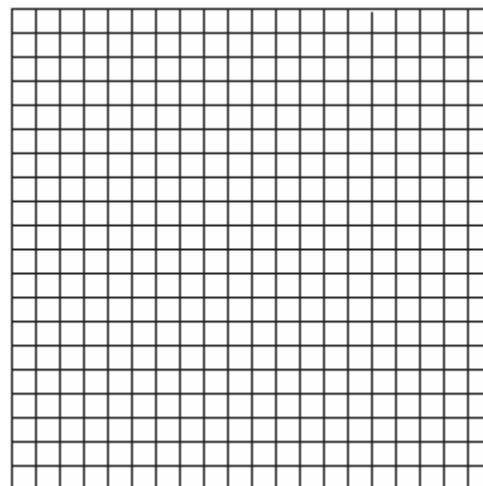
7. 060729a

If the product of x and $\frac{1}{m}$ is -1 , $m \neq 0$, then x is equivalent to

[A] $1 - m$ [B] $-m$ [C] m [D] $-\frac{1}{m}$

8. 080235a, P.I. G.G.68

Determine the distance between point $A(-1,-3)$ and point $B(5,5)$. Write an equation of the perpendicular bisector of \overline{AB} . [The use of the grid is optional.]



[1] B _____

[2] D _____

[2] $b = 6$ by determining the slopes of both lines, sets $\frac{2}{b} =$ negative reciprocal slope of -3 (i.e. $\frac{1}{3}$).

or [2] $b = 6$ by determining the product of the slopes $= -1$.

[1] Sets $\frac{2}{b} = -3$ and solves for $b = \frac{-2}{3}$.

or [1] Finds slope of perpendicular as $\frac{1}{3}$, but

does not solve b .

or [1] $b = 6$ and no work shown.

[0] Does not identify slopes.

or [0] A zero response is completely incorrect, irrelevant, or incoherent; or is a correct response that was obtained by an

[3] obviously incorrect procedure.

[2] A correct equation is written, such as

$$y = -\frac{3}{2}x + 4 \text{ or } (y - 4) = -\frac{3}{2}(x - 0).$$

[1] An appropriate equation is written, but one computational error is made or one incorrect substitution is made.

[1] An appropriate equation is written, but one conceptual error is made, such as writing an equation for a parallel line going through (0,4) or for a perpendicular line that does not go through (0,4).

or [1] The slope is identified correctly as $-\frac{3}{2}$

or the y -intercept as 4, but no equation or an incorrect equation is written.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[4] incorrect procedure.

[3] Three correct equations are shown, such as $y = x + 7$, $y = -x - 6$, and $2y = 2x - 12$.

[2] Only two correct equations are shown.

[1] Only one correct equation is shown.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[5] incorrect procedure.

[6] A _____

[7] B _____

[4] 10 and $y - 1 = -\frac{3}{4}(x - 2)$ or an equivalent equation, and appropriate work is shown.

[3] Appropriate work is shown, but one computational error is made.

[2] Appropriate work is shown, but more than one computational error is made.

or [2] Appropriate work is shown, but one conceptual error is made in determining the distance or the equation of the line.

or [2] The length, the midpoint, and the slope of \overline{AB} are found correctly, but no equation or an incorrect equation is given for the perpendicular bisector.

or [2] Only a correct equation of the perpendicular bisector is found.

[1] The correct distance is found, but no attempt is made to find the equation of the perpendicular bisector.

or [1] The midpoint and slope of \overline{AB} are found correctly, but no further correct work is shown.

or [1] The slope of \overline{AB} and the slope of the perpendicular bisector are calculated correctly.

[0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an obviously

[8] incorrect procedure.