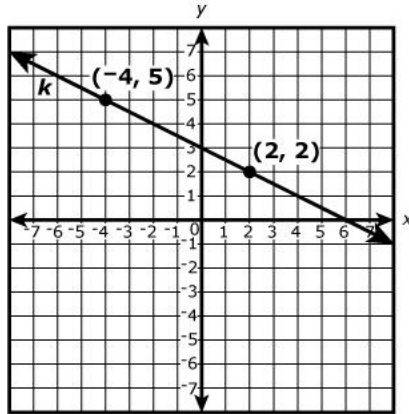## Score Point 4A

This question has four parts.

Line k is shown on this coordinate plane.

Part A

What is the slope of line k? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

slope $= (y_2 - y_1))/(x_2 - x_1)$

slope $= \frac{(5-2)}{(-4-2)} = \frac{3}{-6} = -\frac{1}{2}$

Part B

Line p is parallel to line k. The y-intercept of line p is the point $(0, -4)$. Create an equation that represents line p.

Enter your equation in the space provided.

$y = mx + b$

$y = -\frac{1}{2}x - 4$

Part C

Line r passes through the points $(-2, 1)$ and $(1, 0)$.

Is line r parallel to line k? Explain your reasoning.

Enter your answer and your explanation in the space provided.

slope r = $\frac{(0-1)}{(1+2)} = -\frac{1}{3}$

Line r is not parrallel to line k becuase they have different slopes

Part D

Line s is **perpendicular** to line k. Line s passes through the point $(5, -2)$. Create an equation that represents line s.

Enter your equation in the space provided.

slope s = 2

$y + 2 = 2(x - 5)$
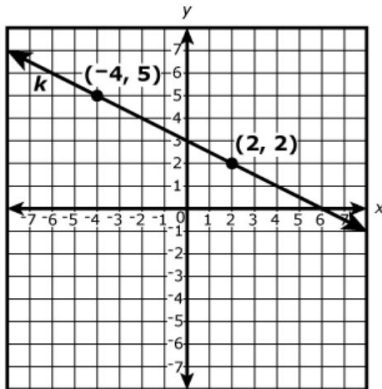
$y + 2 = 2x - 10$

$y = 2x - 12$

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Score Point 4B

This question has four parts.

Line k is shown on this coordinate plane.

Part A

What is the slope of line k? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

$$m = \frac{(y_2 - y_1)}{(x_2 - x_1)} = \frac{(2-5)}{(2-(-4))} = \frac{-3}{6} = -\frac{1}{2}$$

Part B

Line p is parallel to line k. The y-intercept of line p is the point $(0, -4)$. Create an equation that represents line p.

Enter your equation in the space provided.

$$y = -\frac{1}{2}x - 4$$

Part C

Line r passes through the points $(-2, 1)$ and $(1, 0)$.

Is line r parallel to line k? Explain your reasoning.

Enter your answer and your explanation in the space provided.

No, because using the slope formula proves the slope of line r is $\frac{-1}{3}$ and the slope of line k is $\frac{-1}{2}$. For two lines to be parallel, they must have the same slope. Because the slopes of the two lines are different, they are not parallel.

Part D

Line s is **perpendicular** to line k. Line s passes through the point $(5, -2)$. Create an equation that represents line s.
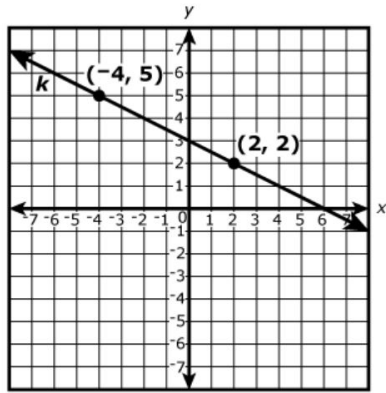
Enter your equation in the space provided.

$$y = 2x - 12$$

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Score Point 3

This question has four parts.

Line k is shown on this coordinate plane.

Part A

What is the slope of line k? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

> the slope of the line is - $\frac{1}{2}$ how i go this is by lookg at the point $(-4,5)$ and $(-2,4)$ and did rise over run which got me $-\frac{1}{2}$.

Part B

Line p is parallel to line k. The y-intercept of line p is the point $(0, -4)$. Create an equation that represents line p.

Enter your equation in the space provided.

> $y = -\frac{1}{2}x - 4$

Part C

Line r passes through the points $(-2, 1)$ and $(1, 0)$.

Is line r parallel to line k? Explain your reasoning.

Enter your answer and your explanation in the space provided.

> no the lines are not parelell becaie the slope isnt no the same for both lines

Part D

Line s is **perpendicular** to line k. Line s passes through the point $(5, -2)$. Create an equation that represents line s.
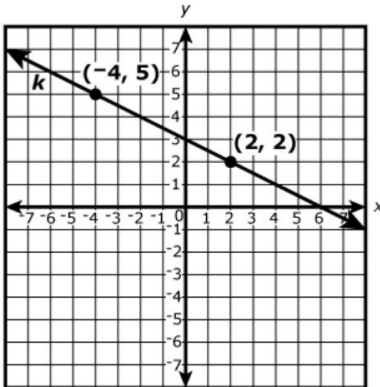
Enter your equation in the space provided.

> $y = -\frac{1}{2}x + 1$

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Score Point 2

This question has four parts.

Line k is shown on this coordinate plane.

Part A

What is the slope of line k? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

> $-\frac{3}{6}$ because the rise is going down 3 so it turns into a -3, and the run is from -4 to 2 so it turns into a 6. It is also negative because it is a downward slope. Making the slope of line K - $\frac{3}{6}$

Part B

Line p is parallel to line k. The y-intercept of line p is the point $(0, -4)$. Create an equation that represents line p.

Enter your equation in the space provided.

> $y = -\frac{3}{6} - 4$

Part C

Line r passes through the points $(-2, 1)$ and $(1, 0)$.

Is line r parallel to line k? Explain your reasoning.

Enter your answer and your explanation in the space provided.

> Line r is not parallel to like k. Because line r slope is not the same as line k making it not parallel to line k

Part D

Line s is **perpendicular** to line k. Line s passes through the point $(5, -2)$. Create an equation that represents line s.
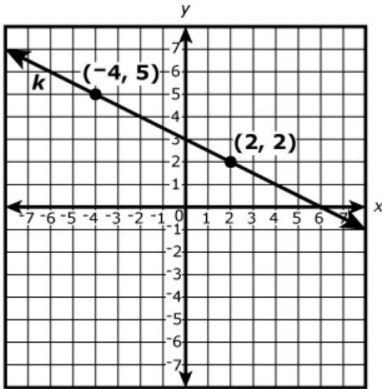
Enter your equation in the space provided.

> $y = 5x - 2$

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Score Point 1

This question has four parts.

Line k is shown on this coordinate plane.

Part A

What is the slope of line k? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

> y = mx + b
>
> $m = \frac{y^2 - y^1}{x^2 - x^1} = \frac{2-5}{2+4} = \frac{-3}{6} = \frac{-1}{2}$

Part B

Line p is parallel to line k. The y-intercept of line p is the point $(0, -4)$. Create an equation that represents line p.

Enter your equation in the space provided.

> $y = \frac{-1}{2} - 4$

Part C

Line r passes through the points $(-2, 1)$ and $(1, 0)$.

Is line r parallel to line k? Explain your reasoning.

Enter your answer and your explanation in the space provided.

> yes because the lines do not intersect with each other

Part D

Line s is **perpendicular** to line k. Line s passes through the point $(5, -2)$. Create an equation that represents line s.
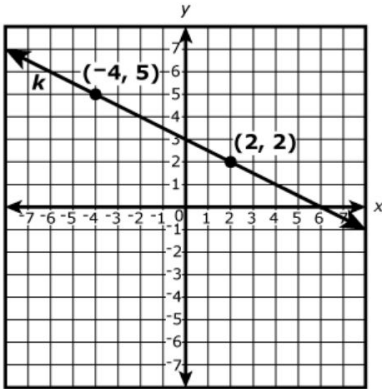
Enter your equation in the space provided.

> y = 1x + 3

Score Point 0

This question has four parts.

Line k is shown on this coordinate plane.

Part A

What is the slope of line k? Show or explain how you got your answer.

Enter your answer and your work or explanation in the space provided.

> The slope is $\frac{1}{2}$. From point $(-4,5)$ I counted down 1 then moved to the right 2 and I got myself to point $(-2,4)$.

Part B

Line p is parallel to line k. The y-intercept of line p is the point $(0, -4)$. Create an equation that represents line p.

Enter your equation in the space provided.

> $y = -2x - 4$

Part C

Line r passes through the points $(-2, 1)$ and $(1, 0)$.

Is line r parallel to line k? Explain your reasoning.

Enter your answer and your explanation in the space provided.

> $y = 3 - 2$

Part D

Line s is **perpendicular** to line k. Line s passes through the point $(5, -2)$. Create an equation that represents line s.

Enter your equation in the space provided.

> $y = -7 + 5$

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