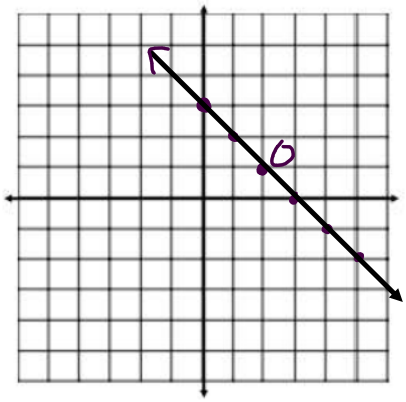
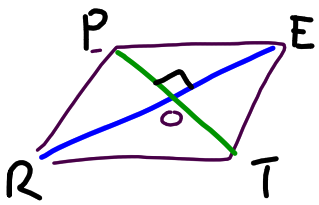
Unit 10 Lesson 6: Additional Coordinate Plane Rhombus Questions...!

1) The diagonals of rhombus PETR intersect at (2,1). If the equation of the line that contains diagonal PT is y = −x + 3, what is the equation of a line that contains diagonal ER?

y = -x+3





PT → y = -x+3
slope PT → -1
slope RE → 1
point slope form
$y - y_1 = m(x - x_1)$
$y - 1 = 1(x - 2)$
$y - 1 = x - 2$
$+1 \quad +1$
$y = x - 1$

2) Parallelogram ABCD has coordinates A(0,7) and C(2,1). Which statement would prove that ABCD is a rhombus?

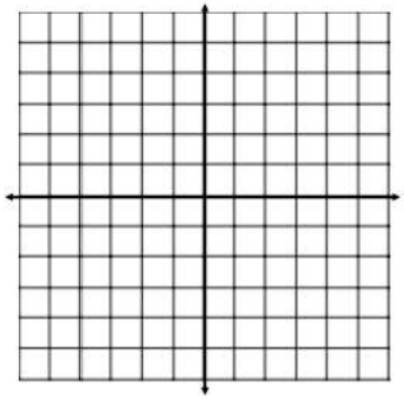
1) The midpoint of AC is (1,4).

2) The length of BD is $\sqrt{40}$.

3) The slope of BD is 1/3 .

4) The slope of AB is 1/3 .

3) In parallelogram MATH, the coordinates of the endpoints of the diagonal MT are M (0, 2) and T (4, 6). Which of the following equations contains diagonal AH and would prove MATH is a rhombus?



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

2) $y = 2x + 2$

3) $y = -\frac{1}{2}x + 3$

4) $y = -2x + 6$