

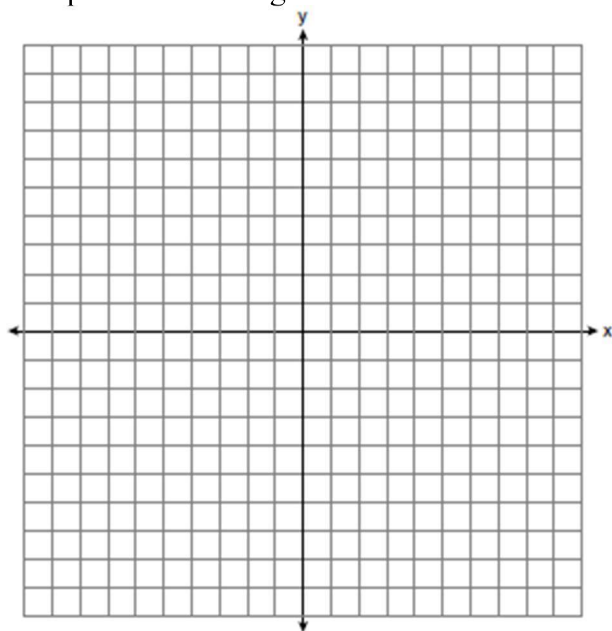
Name _____
Mr. Schlansky

Date _____
Geometry

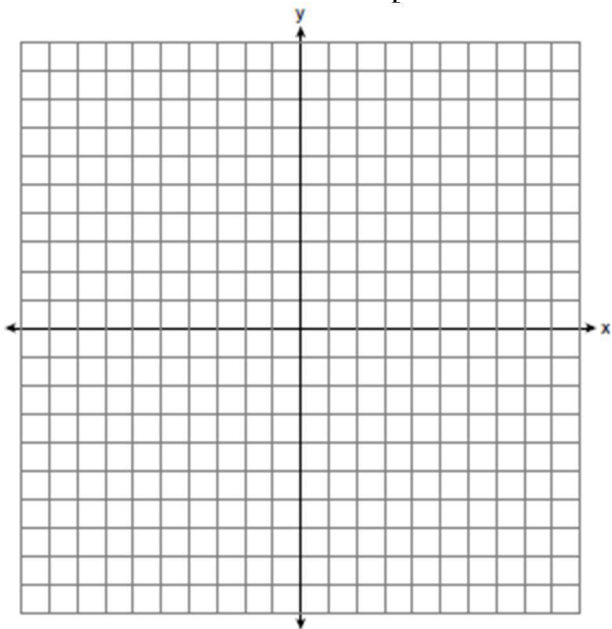


Coordinate Geometry Review Sheet

1. What are the coordinates of the point on the directed line segment from $M(-8,1)$ to $R(6,8)$ that partitions the segment into a ratio of 3 to 4?



2. Directed line segment TX has endpoints whose coordinates are $T(-6,8)$ and $X(9,-2)$. Determine the coordinates of point J that divides the segment in the ratio 2 to 3.



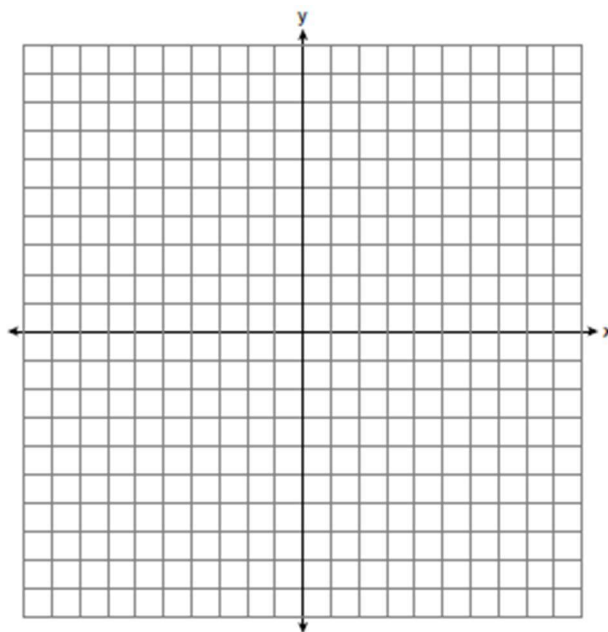
3. Write an equation of the perpendicular bisector of the line segment whose endpoints are (3,5) and (5,9).

1) $y + 7 = -\frac{1}{2}(x + 4)$

2) $y + 7 = 2(x + 4)$

3) $y - 7 = -\frac{1}{2}(x - 4)$

4) $y - 7 = 2(x - 4)$



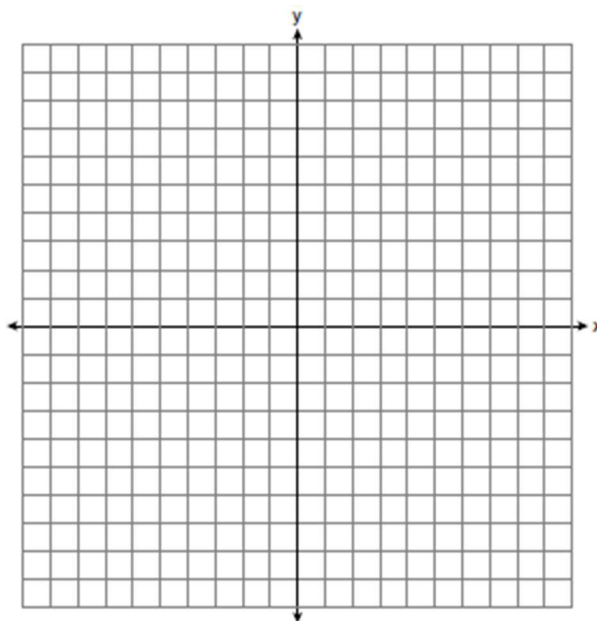
4. Write an equation of the perpendicular bisector of the line segment whose endpoints are (-1,5) and (1,1).

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

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

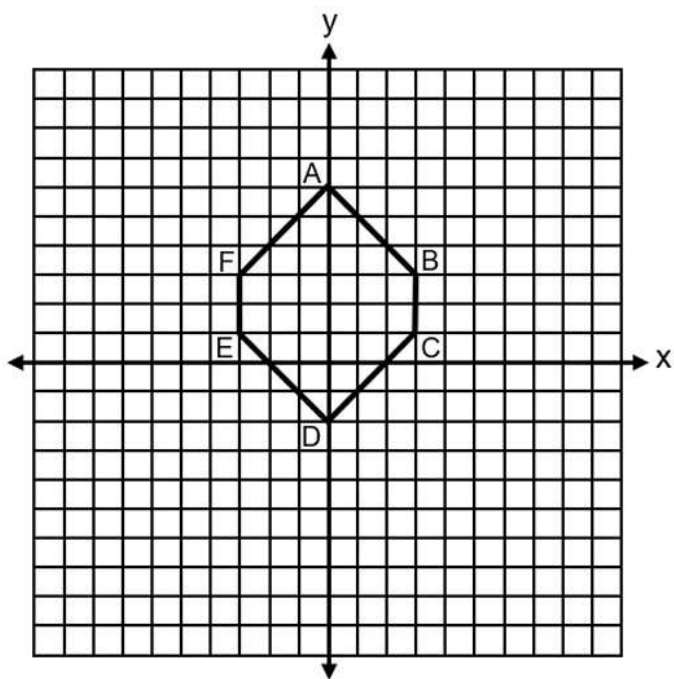
3) $y - 3 = -2x$

4) $y + 3 = -2x$

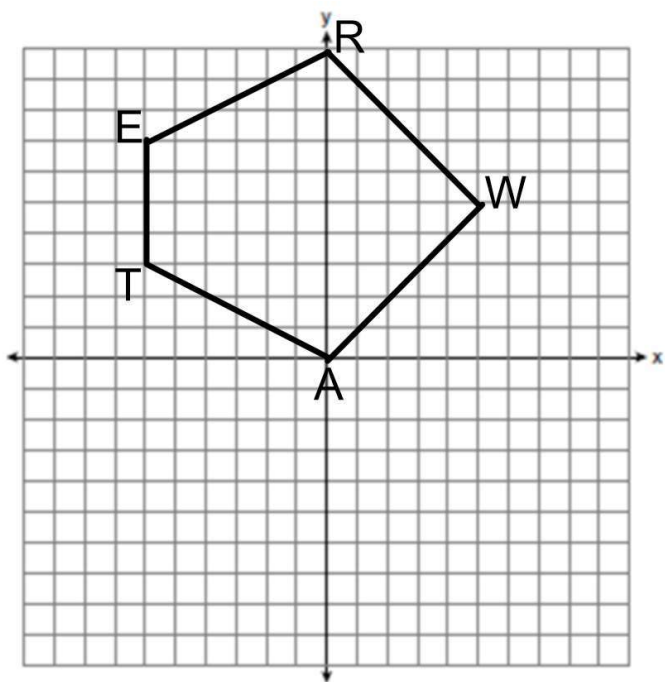


Find the perimeter of the following shapes in simplest radical form:

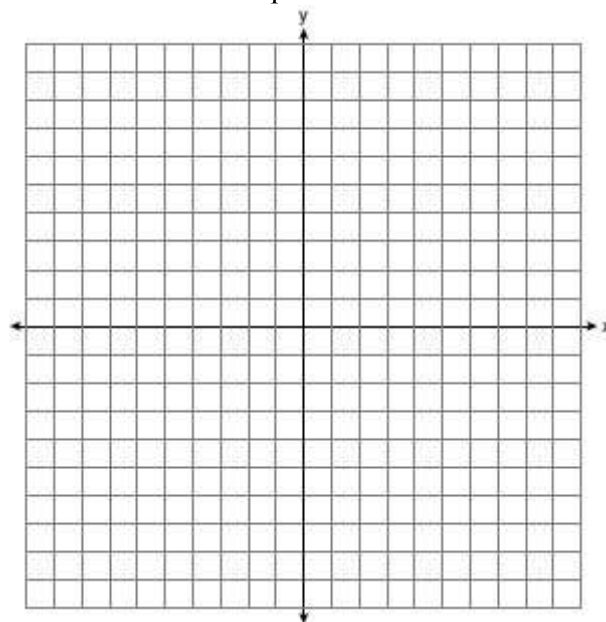
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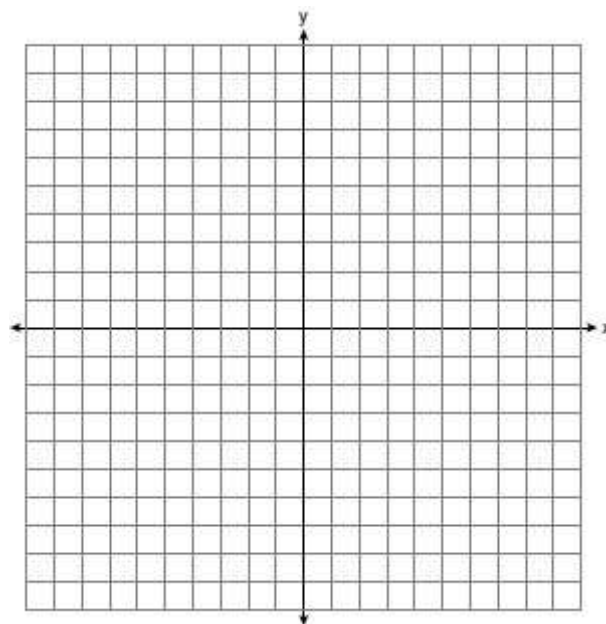
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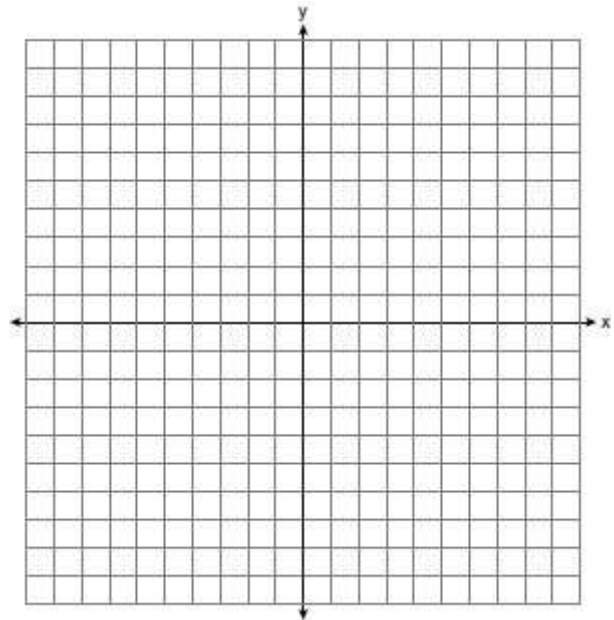
7. Given $C(-7,-3)$, $A(-7,2)$, $M(-1,5)$, $I(3,2)$. Prove $CAMI$ is an isosceles trapezoid.



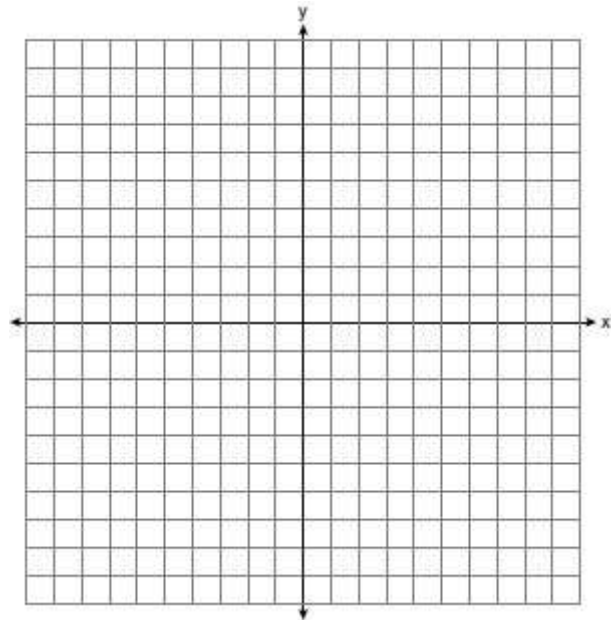
8. Given $M(-5,7)$, $I(-1,10)$, $L(9,5)$, $O(-3,-4)$. Prove $MILO$ is an isosceles trapezoid.



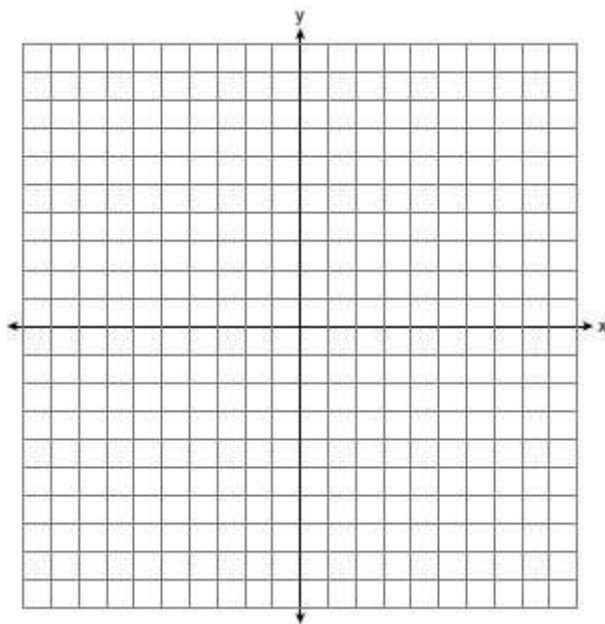
9. Triangle JOY has vertices $J(4,0)$, $O(5,4)$ and $Y(1,5)$. Prove that JOY is an isosceles right triangle.



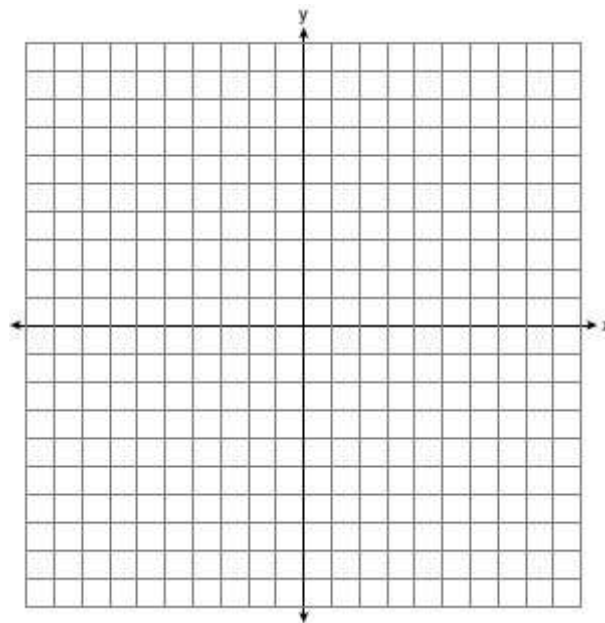
10. Triangle USA has vertices $U(4,-7)$, $S(-3,-4)$, and $A(7,0)$. Prove that triangle USA is an isosceles right triangle.



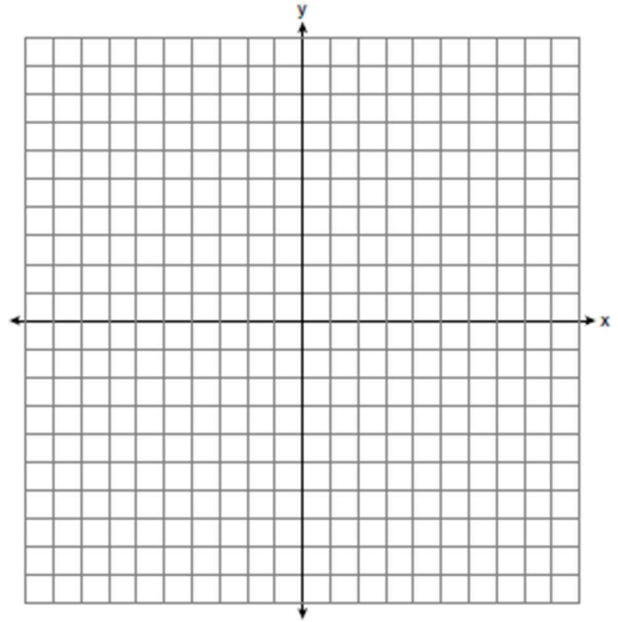
11. Quadrilateral $PQRS$ has vertices $P(-2, 3)$, $Q(3, 8)$, $R(4, 1)$, and $S(-1, -4)$. Prove that $PQRS$ is a rhombus. Prove that $PQRS$ is *not* a square.



12. Quadrilateral $TOBY$ has vertices $T(-4, -8)$, $O(5, -1)$, $B(8, 10)$ and $Y(-1, 3)$. Using coordinate geometry, prove that quadrilateral $TOBY$ is a rhombus but not a square.



13. Triangle PET has vertices with coordinates $P(-6, 4)$, $E(6, 8)$, and $T(-4, -2)$. Prove $\triangle PET$ is a right triangle. State the coordinates of N , the image of P , after a 180° rotation centered at $(1, 3)$. Prove $PENT$ is a rectangle. [The use of the set of axes below is optional.]



14. In the coordinate plane, the vertices of $\triangle RST$ are $R(6, -1)$, $S(1, -4)$, and $T(-5, 6)$. Prove that $\triangle RST$ is a right triangle. State the coordinates of point P such that quadrilateral $RSTP$ is a rectangle. Prove that your quadrilateral $RSTP$ is a rectangle. [The use of the set of axes below is optional.]

