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Unit 6

1. Plot and label the following points:
$A(-1,3), B(3,1), C(1,-2)$, and $D(-3,0)$.

What is the shape? $\qquad$

Proof:

2. If a square has a diagonal of 10 in , what is the area of the square?
3. What is the perimeter of an isosceles trapezoid if the bases are 5 and 10 , and one of the legs is 4?
4. If a segment has endpoints of $(3 x, y)$ and $(-4 x, 5 y)$, and a midpoint of $(4,12)$, solve for $x$ and $y$.
$X=$ $\qquad$ $Y=$ $\qquad$

What are the coordinates of the endpoints? $\qquad$
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5. Partition segment $A B$ such that the ratio of $A$ to $B$ is 5 to 4 if point $A$ is $(-3,1)$ and $B$ is $(15,10)$
6. Find the equation of a line perpendicular to $2 x+3 y=5$ that goes through $(2,1)$

