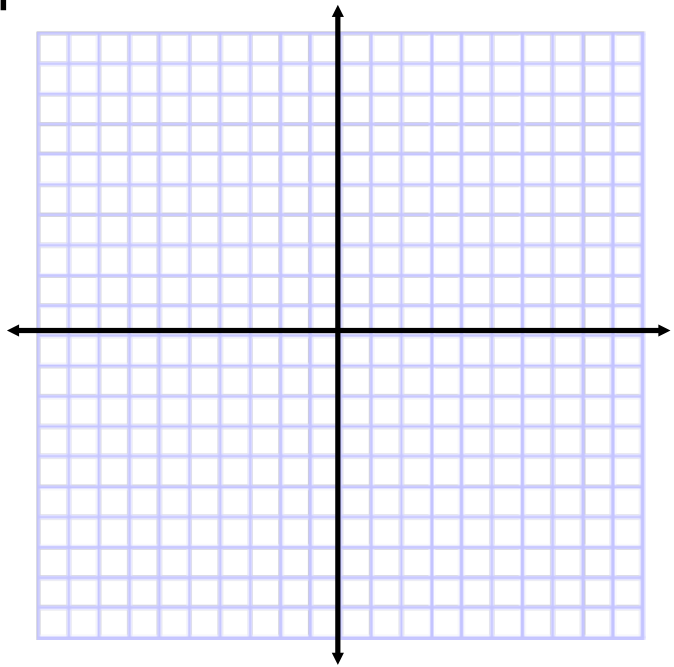
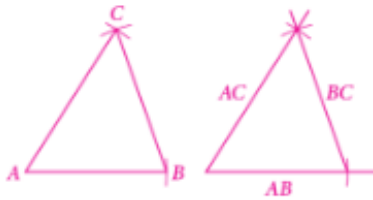


Graph the line $y = 3x - 4$





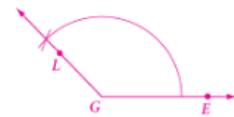
7. possible answer:



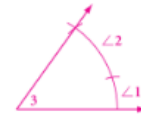
8.



5. possible answer:



6. $m\angle 3 = m\angle 1 + m\angle 2$; possible answer:

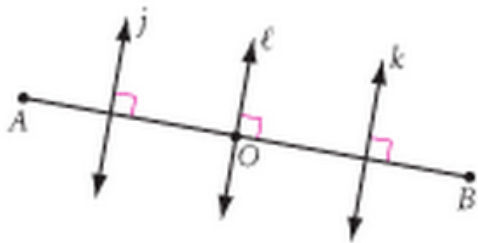


3.2 - Constructing Perpendicular Bisectors

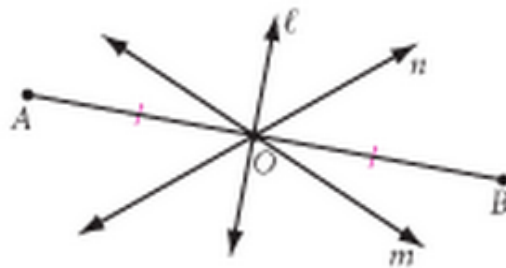
segment bisector -



perpendicular bisector -



Lines j , k , and l are perpendicular to \overline{AB} .



Lines l , m , and n bisect \overline{AB} .



Line l is the perpendicular bisector of \overline{AB} .

Construct a Perpendicular Bisector

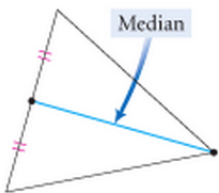
Perpendicular Bisector Conjecture: If a point is on the perpendicular bisector of a segment, then it is equidistant from the endpoints



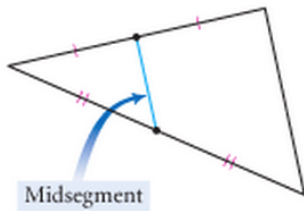
Converse of the Perpendicular Bisector Conjecture: If a point is equidistant from the endpoints of a segment, then it is on the perpendicular bisector of the segment.



Median - segment connecting the vertex of a triangle to the midpoint of its opposite side

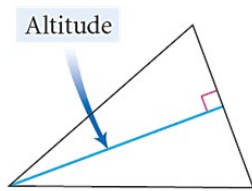


Midsegment - a segment that connects the midpoints of two sides of a triangle

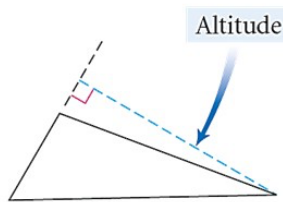


3.3 - Constructing perpendiculars to a line

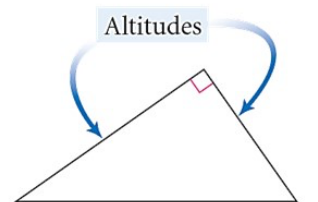
You can also use this construction to find an altitude of a triangle. An **altitude** of a triangle is a perpendicular segment from a vertex to the opposite side or to a line containing the opposite side.



An altitude can be inside the triangle.



An altitude can be outside the triangle.



An altitude can be one of inside the sides of the triangle.

The length of the altitude is the height of the triangle. A triangle has three different altitudes, so it has three different heights.

