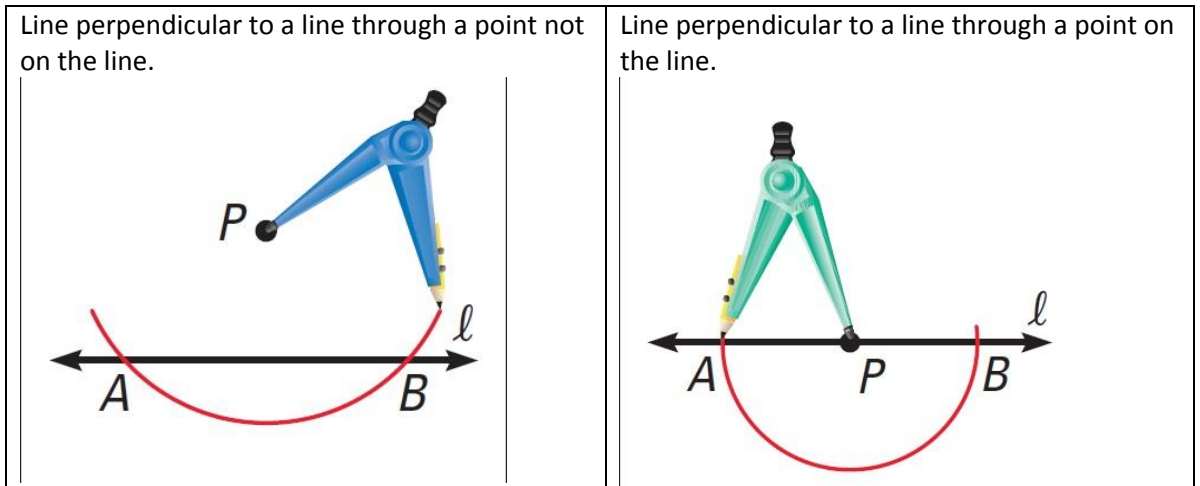**Answer on Question #43098 – Math – Geometry**

Show examples and explain how you construct parallel and perpendicular lines.
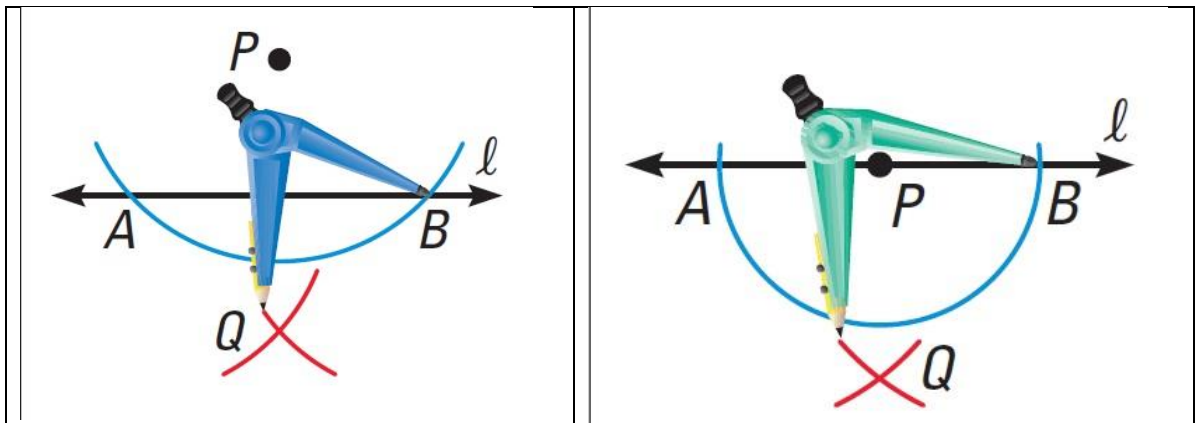
Answer

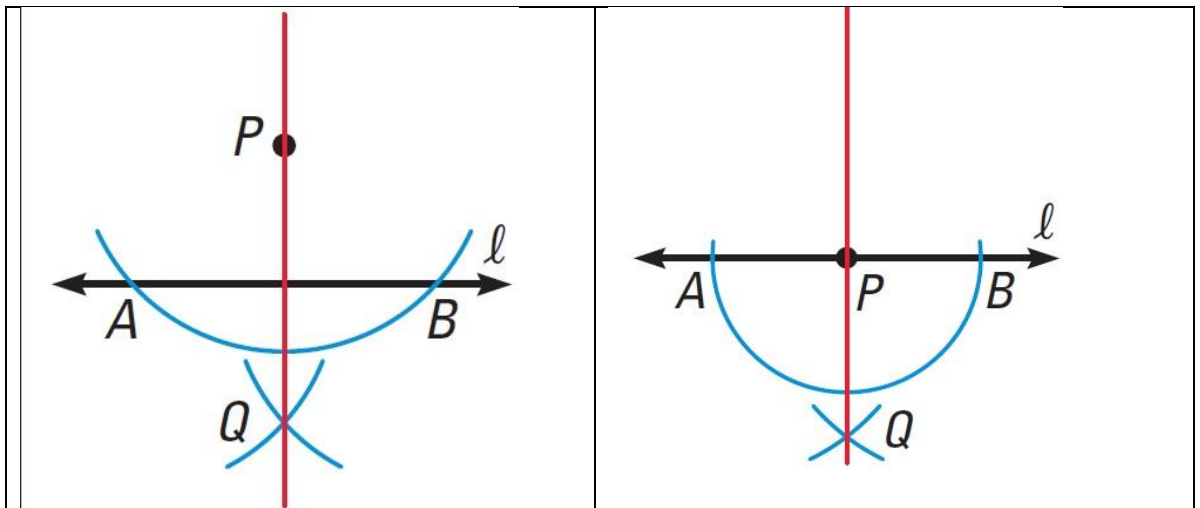Steps to construct a perpendicular to a line in two different cases:

1. Place the compass at point P and draw an arc that intersects line l twice. Label the intersections A and B.

Line perpendicular to a line through a point not on the line.	Line perpendicular to a line through a point on the line.

2. Open your compass wider. Draw an arc with center A. Using the same radius, draw an arc with center B. Label the intersection of the arcs P.
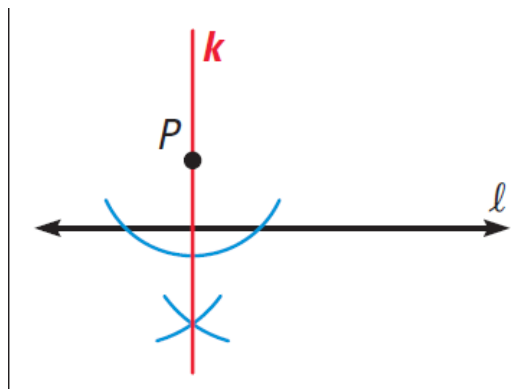

3. Use a straightedge to draw $\overleftrightarrow{PQ}$. $\overleftrightarrow{PQ} \perp l$.

Let's construct a line that passes through point P and is parallel to line l.

Construct a line perpendicular to l through P using the construction on the previous page. Label the line k.

Construct a line perpendicular to k through P using the construction on the previous page. Label the line j. Line j is parallel to line l.