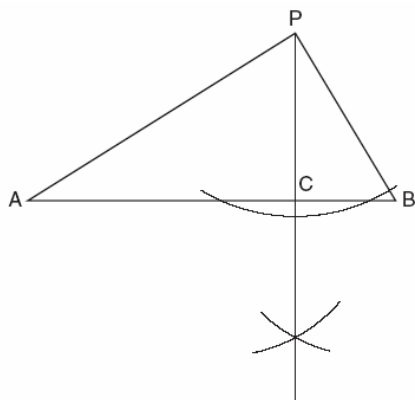


NAME: \_\_\_\_\_

*G.G.19: Construct lines parallel and perpendicular to a given line through a given point, using a straightedge and compass, and justify the construction*

1. 010420a, P.I. G.G.19

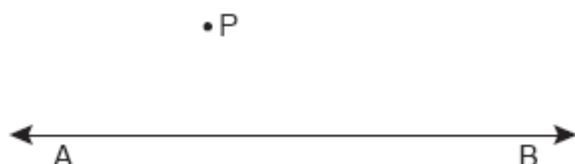
In the accompanying diagram of a construction, what does  $\overline{PC}$  represent?



- [A] the perpendicular bisector of  $\overline{AB}$
- [B] a median drawn to  $\overline{AB}$
- [C] an altitude drawn to  $\overline{AB}$
- [D] the bisector of  $\angle APB$

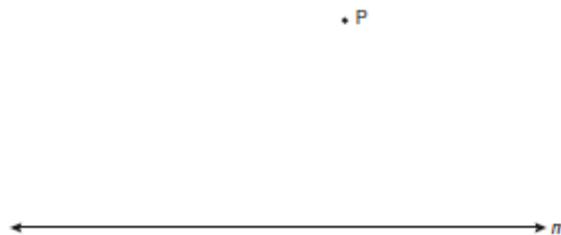
2. 080835a, P.I. G.G.19

Using a compass and straightedge, construct the line that is perpendicular to  $\overline{AB}$  and that passes through point  $P$ . Show all construction marks.



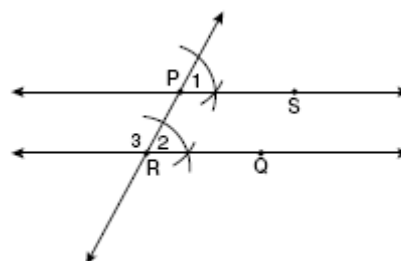
3. 060930ge, P.I. G.G.19

Using a compass and straightedge, construct a line that passes through point  $P$  and is perpendicular to line  $m$ . [Leave all construction marks.]



4. fall0807ge, P.I. G.G.19

The diagram below illustrates the construction of  $\overrightarrow{PS}$  parallel to  $\overrightarrow{RQ}$  through point  $P$ .



Which statement justifies this construction?

- [A]  $\overline{PR} \cong \overline{RQ}$
- [B]  $m\angle 1 = m\angle 2$
- [C]  $\overline{PS} \cong \overline{RQ}$
- [D]  $m\angle 1 = m\angle 3$

*G.G.19: Construct lines parallel and perpendicular to a given line through a given point, using a straightedge and compass, and justify the construction*

[1] C \_\_\_\_\_

[2] A correct construction is drawn, showing all necessary arcs.

[1] All of the construction arcs are drawn, but the perpendicular line is not drawn.

or [1] A line perpendicular to  $\overline{AB}$  is constructed correctly, but it does not pass through point  $P$ .

[0] A drawing that is not an appropriate construction is shown.

or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[2] obviously incorrect procedure. \_\_\_\_\_

[2] A correct construction is drawn showing all appropriate arcs, and the perpendicular line is drawn.

[1] Appropriate work is shown, but one construction error is made, such as not drawing the perpendicular line.

or [1] Appropriate work is shown, but one conceptual error is made.

[0] A drawing that is not an appropriate construction is shown.

or [0] A zero response is completely incorrect, irrelevant, or incoherent or is a correct response that was obtained by an

[3] obviously incorrect procedure. \_\_\_\_\_

[4] B \_\_\_\_\_