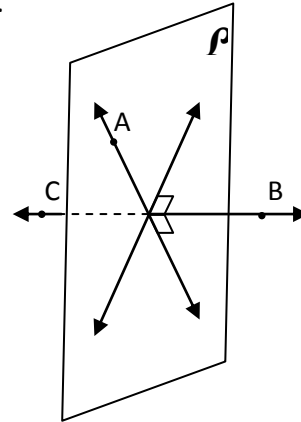


GEOMETRY - CR #3 (CH 1 - 3) – 2015-16

PART I: Write the answer of your choice in the space provided. Provide work that justifies your choice in the space provided. Must show appropriate work to receive full credit.

_____ 1. Which of the following statements is true?

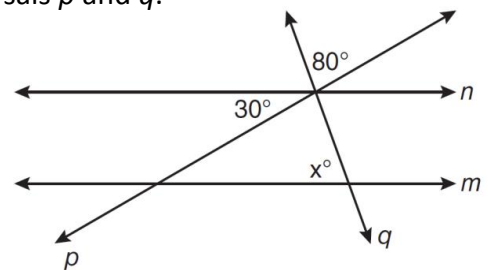
- [A] \overleftrightarrow{BC} lies in plane \mathcal{L} .
- [B] The intersection of \overleftrightarrow{BC} and plane \mathcal{L} is point A.
- [C] Plane \mathcal{L} is perpendicular to \overleftrightarrow{BC}
- [D] Plane \mathcal{L} is parallel to \overleftrightarrow{BC}



_____ 2. In the diagram below, lines n and m are cut by transversals p and q .

What value of x would make lines n and m parallel?

- 1) 110
- 2) 80
- 3) 70
- 4) 50



_____ 3. If the letter **P** is rotated 180 degrees, which is the resulting figure? (Figures not drawn to scale)

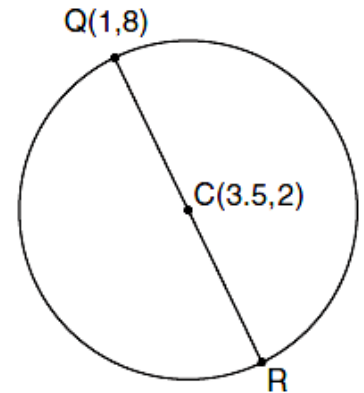
- 1) **d**
- 2) **a**
- 3) **r**
- 4) **b**

-----4. Which of the following equations passes through the points (2, 4) and (-3,-6)?

- [A] $y = (1/2)x - 2$
- [B] $y = 2x$
- [C] $y = 2x + 4$
- [D] $y = (-1/2)x + 2$

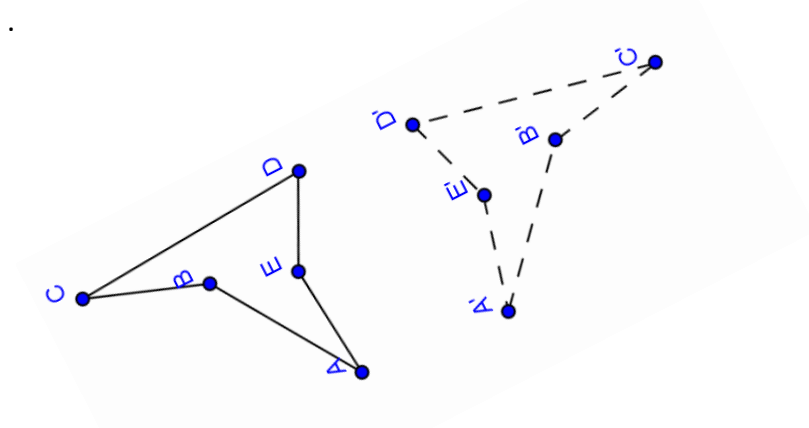
PART II: For each question in this section you must show **ALL WORK**, including formulas, substitutions, drawings, etc. Each question is worth 2 credits. If a solution is given with no work, only one credit will be given.

5. In the diagram below of circle C , \overline{QR} is a diameter, and $Q(1, 8)$ and $C(3.5, 2)$ are points on a coordinate plane. Find and state the coordinates of point R .



Part III - You must show ALL WORK, including formulas, substitutions, drawings, etc.
This question is worth 4 credits. If a solution is given with no work, only one credit will be given.

6. Construct the line of reflection across which the image below was reflected. Explain why the image is isometric.



7. Solve for x . Then find the $m\angle f$. Explain your reasoning as an informal proof for all geometric steps.

