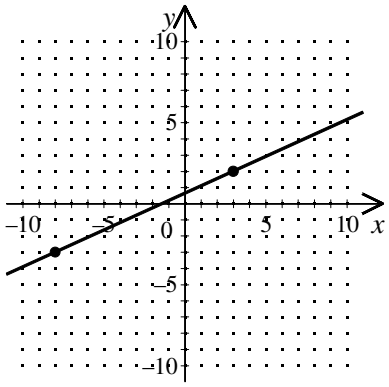
GEO031904 Chapter 3 Test Practice Name: _____ _____

1. Write an equation for the line passing through the point $(-8, 1)$ that has a slope of –5.

2. What is the slope of a line parallel to the line $5x + 3y = 7$?

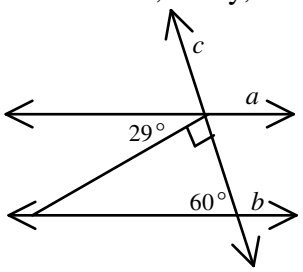
3. Find the slope of the line. [A] $\frac{11}{5}$ [B] $\frac{5}{11}$ [C] $-\frac{11}{5}$ [D] $-\frac{5}{11}$



4. Find the slope of the line passing through the points $A(-2, -3)$ and $B(-4, -5)$.

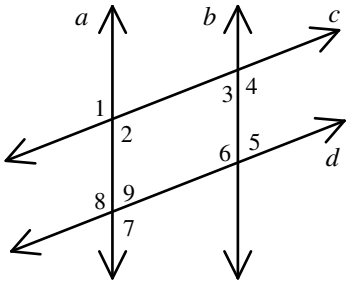
5. The long parallel sides of a soccer pitch are called either touch or sidelines and the short parallel sides are called either goal or endlines. The touch and goal lines are perpendicular to each other. At each end of the pitch, 18 yards from the goal line, and perpendicular to the touch lines is the long side of the penalty box. Explain how you know the long side of each penalty box is parallel to the goal lines.

6. Which lines, if any, can be proved parallel given the following diagram?

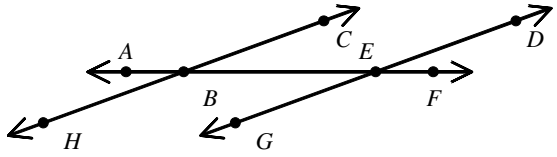


7. Which lines, if any, must be parallel based on the given diagram and information? Give the justification for each conclusion.

Given: $\angle 1 \cong \angle 5$



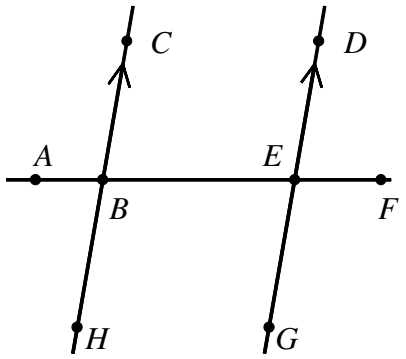
8. In the figure shown, $\overleftrightarrow{HC} \parallel \overleftrightarrow{GD}$ and $m\angle ABC = 156°$. Which of the following statements is false?



[A] $m\angle GEF = 24°$ [B] $\angle ABH$ and $\angle AEG$ are corresponding angles.

[C] $m\angle DEF = 24°$ [D] $\angle HBF$ and $\angle AED$ are alternate interior angles.

9. In the figure, $m\angle ABC = 99°$. Which statement is false?



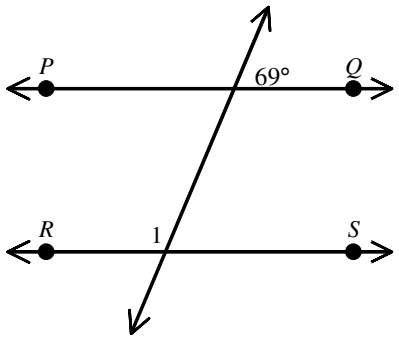
$m\angle GEF = 81°$

$m\angle DEF = 81°$

$\angle HBF$ and $\angle AED$ are alternate interior angles.

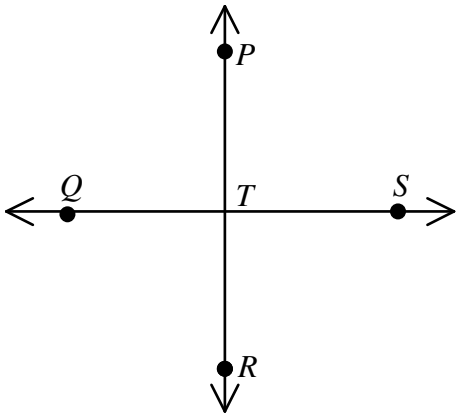
$\angle ABH$ and $\angle AEG$ are corresponding angles.

10. Find $m\angle 1$ in the figure below. $\overleftrightarrow{PQ}$ and $\overleftrightarrow{RS}$ are parallel.

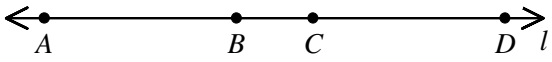


[A] 21° [B] 69° [C] 121° [D] 111°

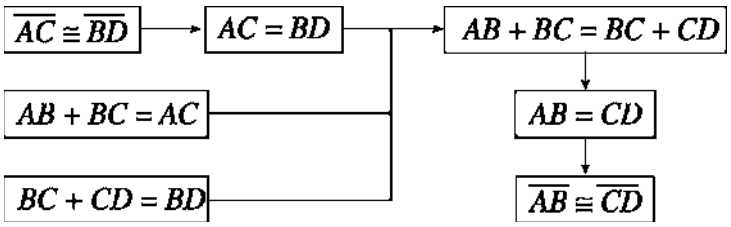
11. Given: $\overleftrightarrow{QS} \perp \overleftrightarrow{PR}$
Prove: $m\angle PTS = 90°$



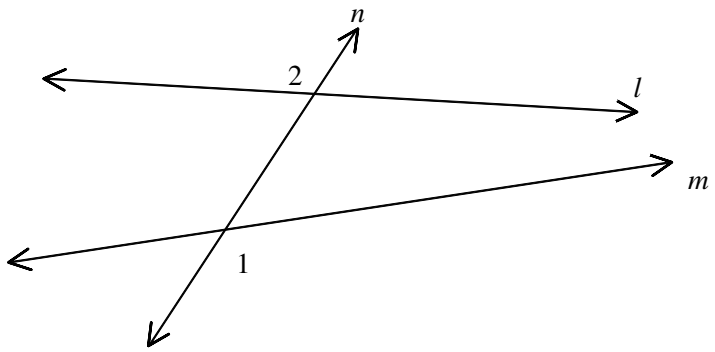
12. Write the reason for each step of the proof.



Given: $\overline{AC} \cong \overline{BD}$
Prove: $\overline{AB} \cong \overline{CD}$

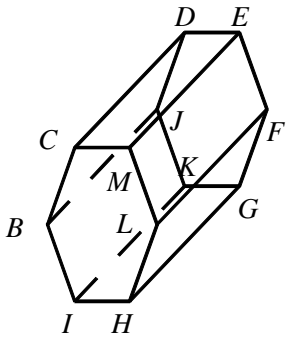


13. In the figure, $\angle 1$ and $\angle 2$ are _____.



[A] corresponding angles
[B] consecutive interior angles
[C] alternate exterior angles
[D] alternate interior angles

14. Name a pair of parallel planes.



15. If $PQ = 3$ and $PQ + RS = 5$, then $3 + RS = 5$ is an example of the _____.

[A] Substitution Property of Equality [B] Multiplication Property of Equality

[C] Reflexive Property of Equality [D] Transitive Property of Equality

16. Which of the following is an example of the Transitive Property?

[A] $x+2 = x+2$ [B] If $x+2 = y$ and $y = -5$, then $x+2 = -5$.

[C] If $x = 2$, then $x-5 = 2-5$. [D] If $y = x-5$, then $x-5 = y$.