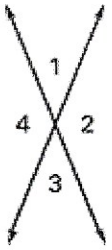
Name: _____ Class: _____ Date: _____ ID: A

Geometry Semester One Exam Review

Completion

Complete each statement.

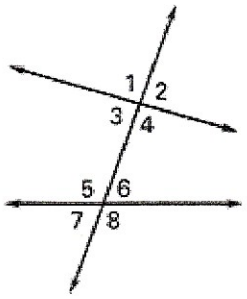
Use the diagram to solve for the missing angle measure.



1. If $m\angle 3 = 25°$, then $m\angle 4 =$ _____.

2. If $m\angle 2 = 78°$, then $m\angle 1 =$ _____.

Use the diagram to complete the statement with *corresponding*, *alternate interior*, *alternate exterior*, or *consecutive interior*.



3. $\angle 3$ and $\angle 5$ are _____ angles.

4. $\angle 2$ and $\angle 7$ are _____ angles.

5. $\angle 2$ and $\angle 6$ are _____ angles.

6. $\angle 4$ and $\angle 5$ are _____ angles.

7. $\angle 3$ and $\angle 7$ are _____ angles.

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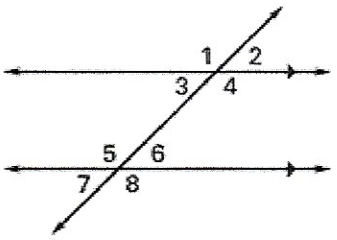
Use the diagram to state whether the given angles are *supplementary* or *congruent*.

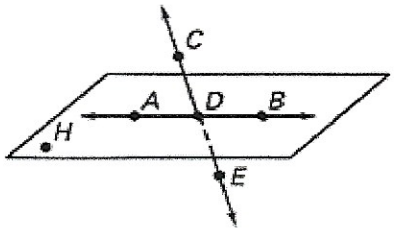


8. $\angle 2$ and $\angle 6$ are _____ angles.

9. $\angle 3$ and $\angle 5$ are _____ angles.

Short Answer

Use the diagram.



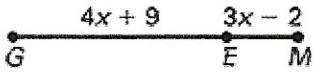
10. Name three noncollinear points

11. Name two intersecting lines

12. Name three collinear points

Solve for the variable using the given information.

13. Given: $GM = 28$



14. Given: $\overline{AB} \cong \overline{CD}$

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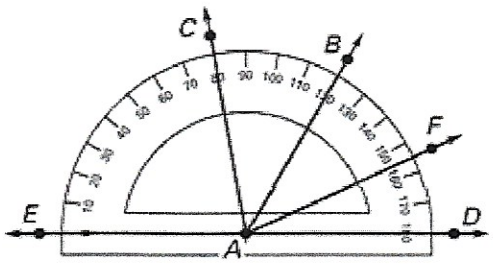
Use the diagram to find the measure of the angle. State what type of angle is formed.



15. $\angle CAF$

16. $\angle BAD$

17. $\angle EAD$

18. $\angle EAB$

Find the coordinates of the midpoint of a segment with the given endpoints.

19. $A(0,0), B(0,-12)$

20. $C(2,9), D(-2,-1)$

21. $E(-3,-3), F(9,-15)$

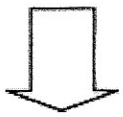
Find the area of the figure described. Round decimals to the nearest tenth.

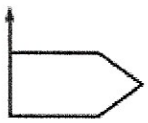
22. Rectangle defined by $L(-2, -4)$, $M(-2, 1)$, $N(7, 1)$, and $P(7, -4)$

23. Triangle defined by $A(3, 4)$, $B(7, 4)$, and $C(5, 7)$

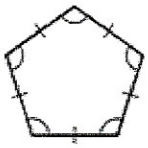
24. Circle with radius 4 yd (Use 3.14 for π)

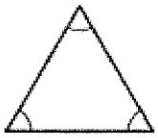
Decide whether the figure is a polygon.

25. 

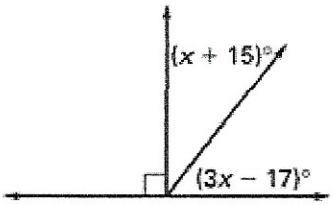
26. 

Tell whether the polygon is best described as *equiangular*, *equilateral*, *regular*, or *none of these*.

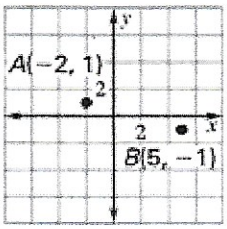
27. 

28. 

Find the value of *x*.

29. 

Find the slope of the line that passes through the labeled points on the graph.

30. 

Using the slope, state whether the lines with the given equations are *parallel*, *perpendicular*, or *neither*.

31. $y = 4x - 3$
$y = 2x - 3$

32. $y = 2x - 3$
$y = -\frac{1}{2}x + 2$

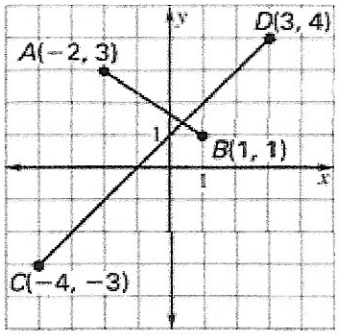
Write an equation of the line that passes through the point *P* and is parallel to the line with the given equation.

33. $P(-4, 5); y = 7 + 8x$

Write an equation of the line that passes through point p and is perpendicular to the line with the given equation.

34. $P(2, 4)$; $y = -8x - 3$

Find the length of the segment. Round decimals to the nearest tenth.

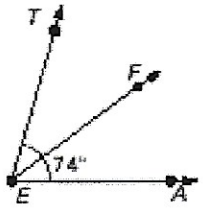


35. $\overline{CD}$

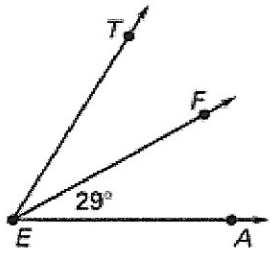
36. $\overline{AB}$

Use the diagram where $\overrightarrow{EF}$ is the angle bisector of $\angle TEA$.

37. Given $m\angle TEA = 74°$, find $m\angle TEF$ and $m\angle FEA$.



38. Given $m\angle FEA = 29°$, find $m\angle TEF$ and $m\angle TEA$.



Other

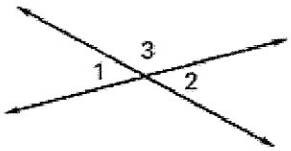
Use the diagram and given information to complete the missing reasons in the proof.

39. *Given:* $AB = BC$

Prove: $\frac{1}{2}AC = BC$

Statements	Reasons
1. $AB = BC$	1. ?
2. $AC = AB + BC$	2. ?
3. $AC = BC + BC$	3. ?
4. $AC = 2BC$	4. ?
5. $\frac{1}{2}AC = BC$	5. ?

40. *Given:* $\angle 1$ and $\angle 3$ are a linear pair. $\angle 2$ and $\angle 3$ are a linear pair.
Prove: $m\angle 1 = m\angle 2$ without using the theorem that vertical angles are congruent.



Statements	Reasons
1. $\angle 1$ and $\angle 2$ are a linear pair. $\angle 2$ and $\angle 3$ are a linear pair.	1. ?
2. $\angle 1$ and $\angle 3$ are supplementary. $\angle 2$ and $\angle 3$ are supplementary.	2. ?
3. $\angle 1 \cong \angle 2$	3. ?
4. $m\angle 1 = m\angle 2$	4. ?