

Name: _____
 Geometry

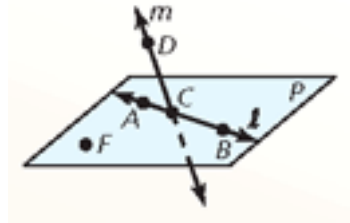
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Basics of Geometry Study Guide

1.1 Points, Lines, and Planes

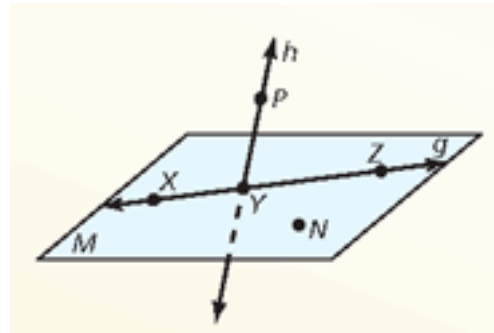
Use the diagram at the right.

1. Give another name for plane P .
2. Name a line in the plane.
3. Name a ray.
4. Name a line intersecting the plane.
5. Name three collinear points.



Use the diagram.

6. Give another name for plane M .
7. Name a line in the plane.
8. Name a line intersecting the plane.
9. Name two rays.
10. Name a pair of opposite rays.
11. Name a point not in the plane M .



1.2 Measuring and Constructing Segments

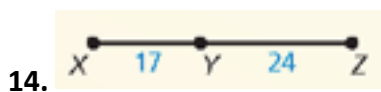
12. Find AC .



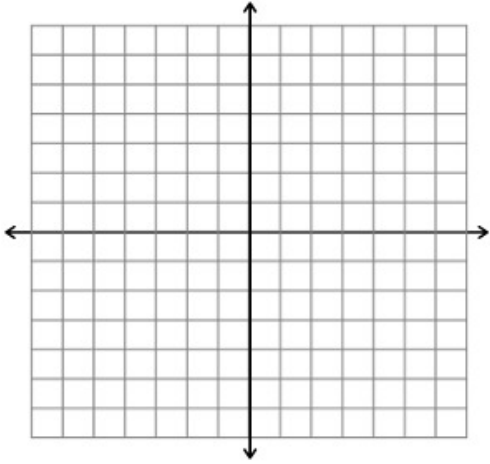
13. Find EF .



Find XZ .

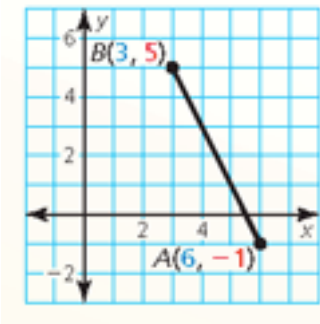


16. Plot $A(8, -4)$, $B(3, -4)$, $C(7, 1)$, and $D(7, -3)$ in a coordinate plane. Then determine whether \overline{AB} and \overline{CD} are congruent.



1.3 Using Midpoint and Distance Formulas

17. The endpoints of \overline{AB} are $A(6, -1)$ and $B(3, 5)$. Find the coordinates of the midpoint M . Then find the distance between points A and B .



Find the coordinates of the midpoint M . Then find the distance between points S and T .

18. $S(-2, 4)$ and $T(3, 9)$

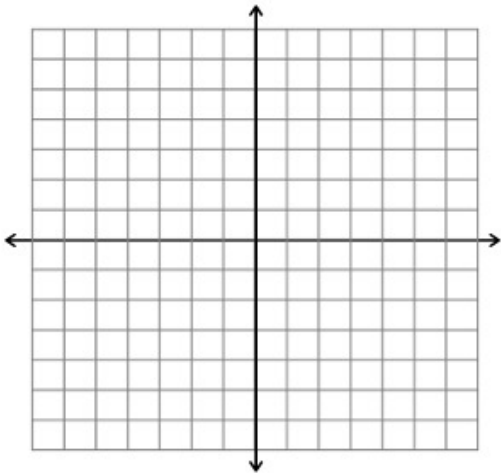
19. $S(6, -3)$ and $T(7, -2)$

20. The midpoint of \overline{JK} is $M(6, 3)$. One endpoint is $J(14, 9)$. Find the coordinates of endpoint K .

21. Point M is the midpoint of \overline{AB} where $AM = 3x + 8$ and $MB = 6x - 4$. Find AB .

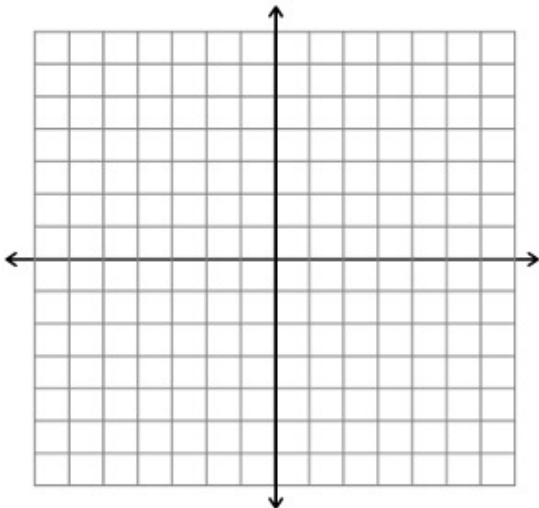
1.4 Perimeter and Area in the Coordinate Plane

22. Find the perimeter and area of rectangle $ABCD$ with vertices $A(-3,4)$, $B(6,4)$, $C(6,-1)$, and $D(-3,-1)$.

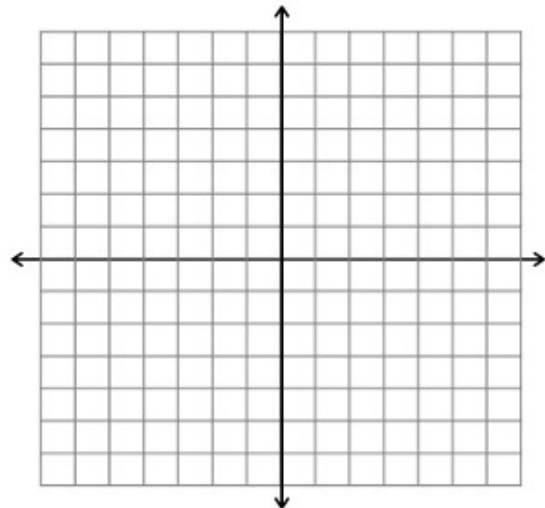


Find the perimeter and area of the polygon with the given vertices.

23. $W(5, -1)$, $X(5,6)$, $Y(2, -1)$, $Z(2,6)$

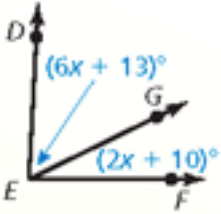


24. $E(6, -2)$, $F(6,5)$, $G(-1,5)$



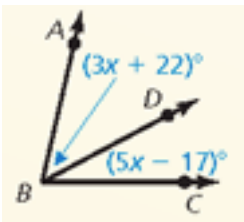
1.5 Measuring and Constructing Angles

25. Given that $m\angle DEF = 87^\circ$, find $m\angle DEG$ and $m\angle GEF$.

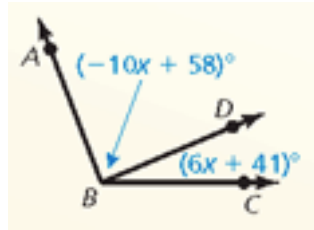


Find $m\angle ABD$ and $m\angle CBD$.

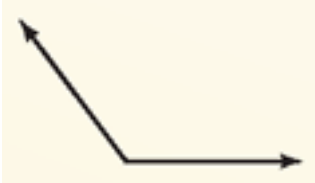
26. $m\angle ABC = 77^\circ$



27. $m\angle ABC = 111^\circ$

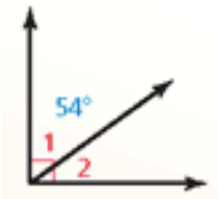


28. Find the measure of the angle using a protractor.

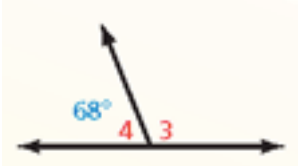


1.6 Describing Pairs of Angles

29. $\angle 1$ is a complement of $\angle 2$, and $m\angle 1 = 54^\circ$. Find $m\angle 2$.



30. $\angle 3$ is a supplement of $\angle 4$, and $m\angle 4 = 68^\circ$. Find $m\angle 3$.



$\angle 1$ and $\angle 2$ are complementary angles. Given $m\angle 1$, find $m\angle 2$.

31. $m\angle 1 = 12^\circ$

32. $m\angle 1 = 83^\circ$

$\angle 3$ and $\angle 4$ are supplementary angles. Given $m\angle 3$, find $m\angle 4$.

33. $m\angle 3 = 116^\circ$

34. $m\angle 3 = 56^\circ$