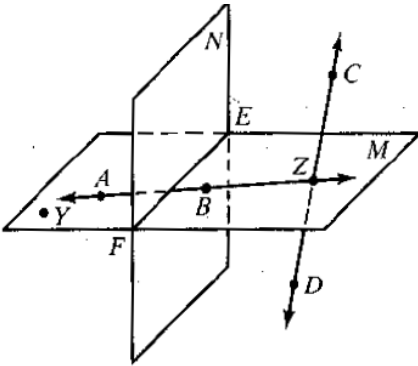
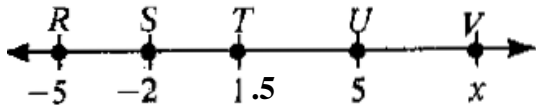


Use the figure below for #1-6.



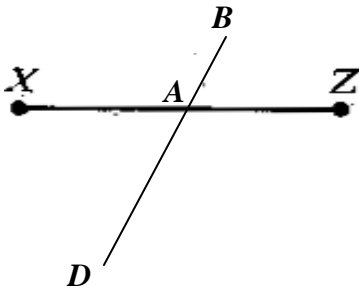
1. What point is the intersection of  $\overleftrightarrow{CD}$  and  $\overleftrightarrow{AZ}$ ?
2. Give another name for plane  $M$ .
3. Name a set of 4 noncollinear points.
4. Give another name for  $\overleftrightarrow{CD}$ .
5. Name all segments on  $\overleftrightarrow{AZ}$ .

Use the figure below for #6-9.



6. Give another name for  $\overrightarrow{TR}$ .
7. Name a pair of opposite rays with endpoint  $T$ .
8. Find the length of  $\overline{RT}$ .
9. What is the coordinate of the midpoint of  $\overline{SU}$ ?

Use the figure below for #10-11. Point  $A$  is the midpoint of  $\overline{XZ}$ . SHOW WORK.

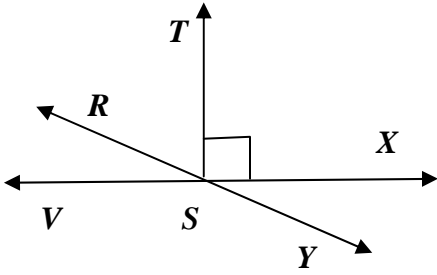


10. If  $XA = 6n + 5$  and  $XZ = 70$ , find  $n$  and the length of  $\overline{AZ}$ .

11. If  $DA = 3(y + 7)$ ,  $AB = 2(y - 3)$ , and  $BD = 50$ , find  $y$  and the length of  $\overline{DA}$ .

12. If the measure of an angle is  $29^\circ$ , the measure of its complement is \_\_\_\_\_ and the measure of its supplement is \_\_\_\_\_.

Use the figure below for #13-18;  $m\angle RSV = 23^\circ$ .



13.  $m\angle RST = \underline{\hspace{2cm}}$ ,  $m\angle RSX = \underline{\hspace{2cm}}$ ,  $m\angle TSY = \underline{\hspace{2cm}}$

Is the angle acute, right, or obtuse?

14.  $\angle TSV$

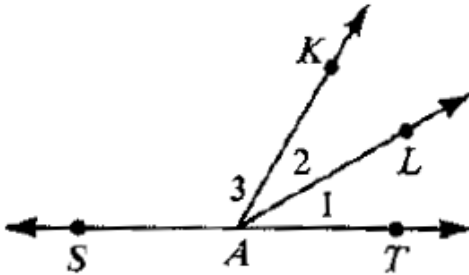
15.  $\angle XSY$

16.  $\angle YSV$

17.  $\angle RSV$  and  $\angle \underline{\hspace{2cm}}$  are vertical angles.

18.  $\angle XSY$  and  $\angle \underline{\hspace{2cm}}$  form a linear pair.

Use the figure below for #19-22.



19. Name the sides of  $\angle KAL$ .

20.  $\angle KAT$  is adjacent to  $\angle \underline{\hspace{2cm}}$ .

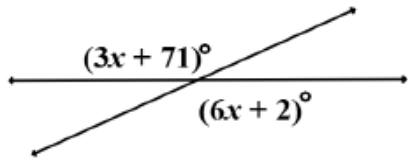
21. If  $\vec{AL}$  bisects  $\angle KAT$ , then  $m\angle \underline{\hspace{2cm}} = m\angle \underline{\hspace{2cm}}$ .

22. If  $\vec{AL}$  bisects  $\angle KAT$ ,  $m\angle 1 = 2x + 3$ , and  $m\angle 3 = 12x + 30$ , find  $x \underline{\hspace{2cm}}$  and  $m\angle KAT \underline{\hspace{2cm}}$ .  
SHOW WORK

23.  $\angle A$  and  $\angle B$  are complementary,  $m\angle A = x + 10$ , and  $m\angle B = 2x - 7$ . Find  $m\angle B$ .  
SHOW WORK

24.  $\angle C$  and  $\angle D$  are supplementary,  $m\angle C = y - 9$ , and  $m\angle D = 4y + 14$ . Find  $m\angle D$ .  
SHOW WORK

25. Find the value of  $x$ . SHOW WORK



**For #26- 30, round decimal answers to the nearest tenth. SHOW WORK.**

26. The diameter of a circle is 18 inches. Find circumference \_\_\_\_\_  
and area \_\_\_\_\_. Use  $\pi \approx 3.14$ .

27. The area of a rectangle is  $98 \text{ cm}^2$  and its length is 14 cm. Find the perimeter of the rectangle. \_\_\_\_\_

28. Find the area of a triangle with base 27 mm and height 6 mm. \_\_\_\_\_

29. Use points  $M(-2, 8)$  and  $P(4, -5)$ .

a) Use the distance formula to find  $MP$ .

b) Find the midpoint of  $\overline{MP}$ .

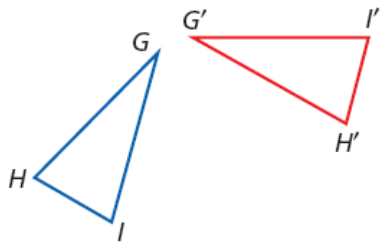
30. 

Find the length of  $\overline{AC}$ .

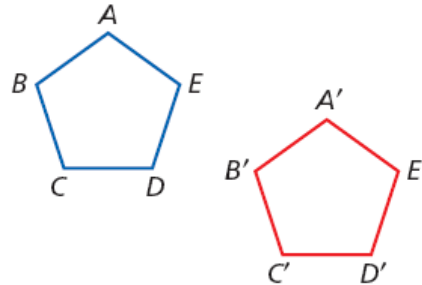
31. Point  $M$  is the midpoint of  $\overline{RS}$ . Point  $R$  is  $(-8, 4)$  and point  $M$  is  $(2, -3)$ . Find the coordinates of point  $S$ . SHOW WORK.

#32-34: What type of transformation?

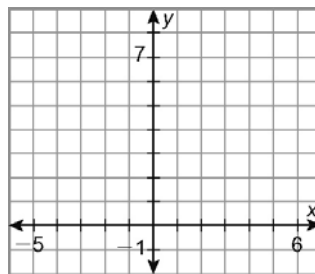
32.



33.



34. Triangle  $CDE$  has vertices at  $C(-4, 6)$ ,  $D(-1, 6)$ , and  $E(-2, 1)$ . After a transformation, the image of the figure has vertices at  $C'(4, 6)$ ,  $D'(1, 6)$ , and  $E'(2, 1)$ . Draw and label the triangles.



35. Find the coordinates for the image after the given translation.

preimage:  $\triangle XYZ$  at  $X(-6, 1)$ ,  $Y(4, 0)$ ,  $Z(1, -3)$

rule:  $(x, y) \rightarrow (x + 5, y - 8)$

$X'(\quad, \quad)$   $Y'(\quad, \quad)$   $Z'(\quad, \quad)$