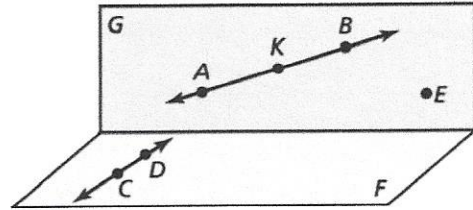


Name \_\_\_\_\_ Date \_\_\_\_\_

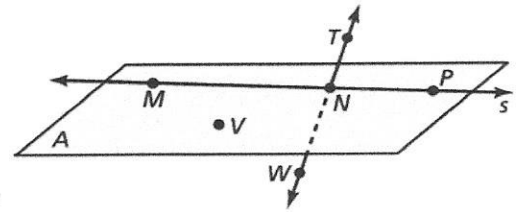
In Exercises 1–3, use the diagram.

- Name two points. *Answers vary*  
A and B
- Name two lines. *Answers vary*  
 $\overleftrightarrow{CD}$  and  $\overleftrightarrow{AB}$
- Name the plane that contains point A, B, and E.  
G



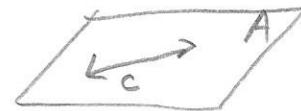
In Exercises 4–7, use the diagram.

- Give one other name for  $\overline{MN}$ . *Answers vary*  
 $\overline{NP}$
- Name three points that are collinear. *Answers vary*  
M, N, P
- Name three points that are coplanar. *Answers vary*  
M, V, P
- Name a point that is *not* coplanar with points N, P, and T.  
V

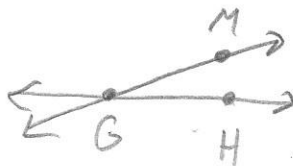


In Exercises 8–10, sketch the figure described.

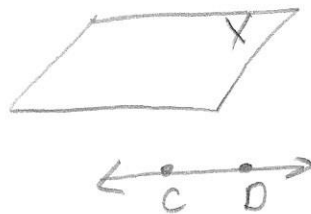
- plane A and line c intersecting at all points on line c



- $\overline{GM}$  and  $\overline{GH}$

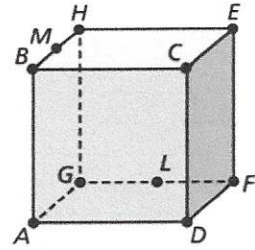


- line  $\overline{CD}$  and plane X not intersecting



Geometry 1-1 Points, Lines, Planes

In Exercises 11–14, use the diagram.



11. Name a point that is coplanar with points  $A$ ,  $D$ , and  $G$ .

$L$  or  $F$

12. Name the intersection of plane  $HEG$  and plane  $DFE$ .

$\overline{EF}$

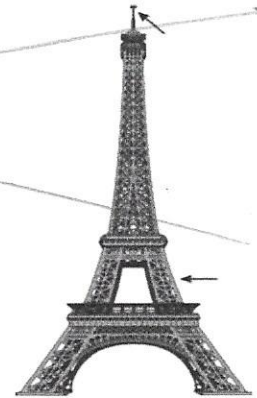
13. Name a point that is collinear with  $BH$ .

$M$

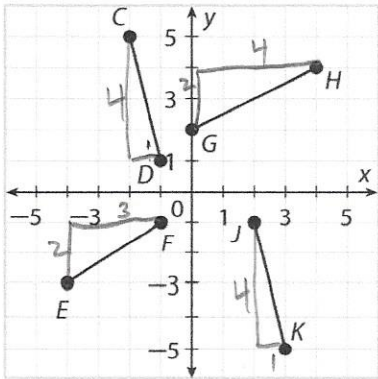
14. Name a point that is *not* coplanar with points  $C$ ,  $E$ , and  $M$ . *Answers vary*

$G$

15. What geometric terms are modeled by the Eiffel Tower?



Use the distance formula to determine whether each pair of segments have the same length.



16.  $\overline{CD}$  and  $\overline{EF}$

$\overline{CD}$

$$1^2 + 4^2 = x^2$$

$$1 + 16 = x^2$$

$$17 = x^2$$

$$x = \sqrt{17} = 4.1$$

not equal

$\overline{EF}$

$$2^2 + 3^2 = x^2$$

$$4 + 9 = x^2$$

$$13 = x^2$$

$$x = \sqrt{13} = 3.6$$

17.  $\overline{GH}$  and  $\overline{JK}$

$\overline{GH}$

$$2^2 + 4^2 = x^2$$

$$4 + 16 = x^2$$

$$20 = x^2$$

$$x = \sqrt{20} = 4.5$$

not equal

$\overline{JK}$

$$1^2 + 4^2 = x^2$$

$$1 + 16 = x^2$$

$$17 = x^2$$

$$x = \sqrt{17} = 4.1$$

Geometry 1-1 Points, Lines, Planes

Use the distance formula to find length between the given points.

18.  $(-2, -8), (-4, -5)$

$$\begin{aligned} 2^2 + 3^2 &= x^2 \\ 4 + 9 &= x^2 \\ 13 &= x^2 \\ x &= \sqrt{13} = 3.6 \end{aligned}$$

19.  $(3, -8), (-4, -1)$

$$\begin{aligned} 7^2 + 7^2 &= x^2 \\ 49 + 49 &= x^2 \\ 98 &= x^2 \end{aligned}$$

$$x = \sqrt{98} = 9.9$$

In Exercises 20 – 23, use the diagram.

20. Name four points *Answers vary*

*A, B, C, D*

21. Name two lines.

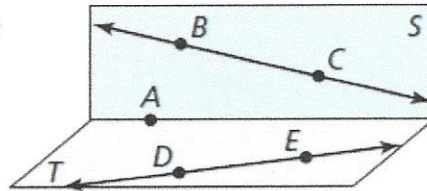
*$\overleftrightarrow{BC}$  and  $\overleftrightarrow{DE}$*

22. Name the plane that contains points A, B, and C.

*S*

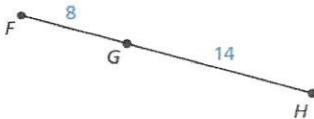
23. Name the plane that contains points A, D, and E.

*T*



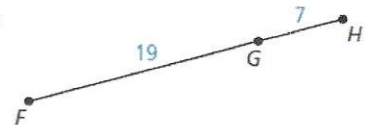
In Exercises 24–27, find  $FH$ .

24.



$$FH = 8 + 14 = 22$$

25.



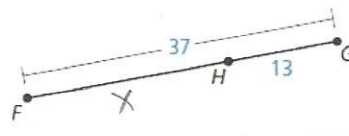
$$FH = 19 + 7 = 26$$

26.



$$FH = 11 + 12 = 23$$

27.



$$X + 13 = 37$$

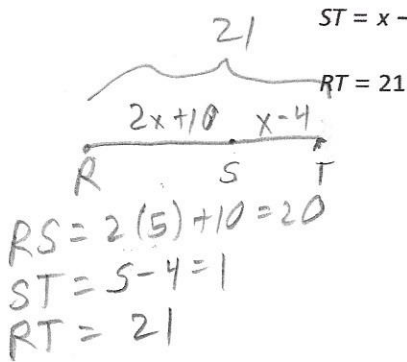
$$X = 24$$

Geometry 1-1 Points, Lines, Planes

Point  $S$  is between points  $R$  and  $T$  on  $RT$ . Use the information to write an equation in terms of  $x$ . Then solve the equation and find  $RS$ ,  $ST$ , and  $RT$ .

28.  $RS = 2x + 10$

$ST = x - 4$



$$2x + 10 + x - 4 = 21$$

$$3x + 6 = 21$$

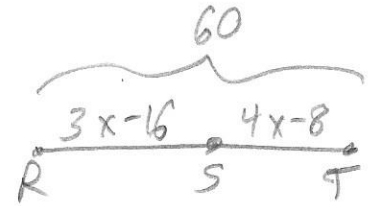
$$3x = 15$$

$$x = 5$$

29.  $RS = 3x - 16$

$ST = 4x - 8$

$RT = 60$



$$3x - 16 + 4x - 8 = 60$$

$$7x - 24 = 60$$

$$7x = 84$$

$$x = 12$$

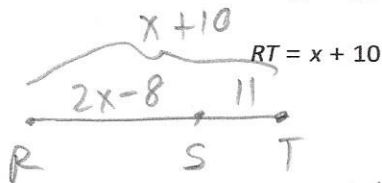
$$RS = 3(12) - 16 = 20$$

$$ST = 4(12) - 8 = 40$$

$$RT = 60$$

30.  $RS = 2x - 8$

$ST = 11$



$$2x - 8 + 11 = x + 10$$

$$2x + 3 = x + 10$$

$$x + 3 = 10$$

$$x = 7$$

$$RS = 2(7) - 8 = 6$$

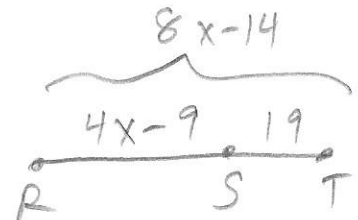
$$ST = 11$$

$$RT = 7 + 10 = 17$$

31.  $RS = 4x - 9$

$ST = 19$

$RT = 8x - 14$



$$4x - 9 + 19 = 8x - 14$$

$$4x + 10 = 8x - 14$$

$$10 = 4x - 14$$

$$24 = 4x$$

$$x = 6$$

$$RS = 4(6) - 9 = 15$$

$$ST = 19$$

$$RT = 8(6) - 14 = 34$$