$\qquad$
$\qquad$
Name the following. Be as specific as possible. List as many ways as possible.

1. $\bullet Y$
2. 


5.

6.

7. State one similarity and one difference between a segment and a ray.
8. If a line has one dimension, and a plane has two dimensions, what kind of dimension does a point have?

Use the Pythagorean Theorem to determine the length of each segment in the figure shown.
9. $\overline{A B}$
10. $\overline{C D}$
$\qquad$
11. $\overline{F G}$


Use the Pythagorean Theorem to find the missing side of the right triangle. Leave your answer in simplest radical form.
12. $a=5, b=12, c=?$
13. $a=?, b=1, c=9$
14. $a=8, b=?, c=16$
15. $\mathrm{a}=3, \mathrm{~b}=6, \mathrm{c}=$ ?
16. $a=1, b=2, c=$ ?
17. $a=?, b=12, c=20$

### 1.1 Cont. Midpoint \& Distance Formula

## Show all work

18. Find the length of $\overline{A C}$ using the Distance Formula. Then find the length of $\overline{A C}$ using the Pythagorean Theorem. Do you get the same length? Why or why not?

Distance formula $\qquad$

Pythagorean Theorem $\qquad$

Same? $\qquad$
$\qquad$
$\qquad$

19. What happens if the distance formula is used to find $\overline{B C}$ ? $\qquad$

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

20. $\overline{C D}$ and $\overline{J K}$
21. $\overline{G H}$ and $\overline{E F}$

Find the coordinates of the midpoint of a segment with given endpoints. Then find the length of the segment.
22. $A(5,0), B(1,4)$
midpoint: $\qquad$
23. $R(-6,1), S(-3,-3)$ midpoint: $\qquad$
24. $X(2,-7), Y(-1,7)$
midpoint: $\qquad$
length: $\qquad$

