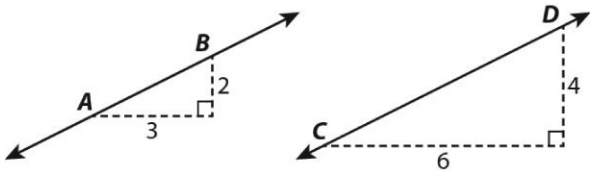
Module 10.1 Practice

Find the slope.



1. Line $\overline{AB}$ $\frac{2}{3}$

2. Line $\overline{CD}$ $\frac{4}{6} = \frac{2}{3}$

3. Are $\overline{AB}$ and $\overline{CD}$ parallel? Explain your reasoning.

   Yes because

Line *A* contains the points (2, 6) and (4, 10). Line *B* contains the points (-2, 3) and (3, 13).

4. Find the slope of line *A*

   $\frac{4}{2} = 2$

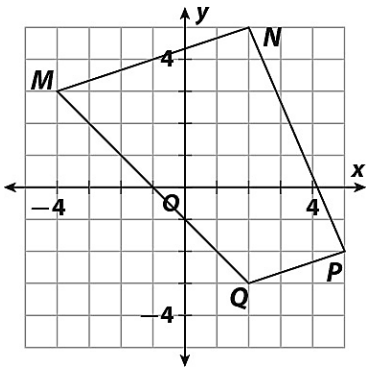
5. Find the slope of line *B*

   $\frac{10}{5} = 2$

6. Are Line *A* and Line *B* parallel? Explain your reasoning.

   Yes because

For Problems 7–10, use the graph.



7. Describe a method you can use to show that figure *MNPQ* is a trapezoid.

Find exactly one pair of parallel sides.

8. Which two sides should you choose to see if they are parallel? Explain why you chose those sides.

   MN and QP since they look parallel.

9. What is the slope of the first side you chose?

   $\frac{2}{6} = \frac{1}{3}$

10. What is the slope of the second side?

    $\frac{1}{3}$

Figure *JKLM* has as its vertices the points *J*(4, 4), *K*(2, 1), *L*(–3, 2), and *M*(–1, 5).

Find each slope.

11. $\overline{JK}$ $\frac{3}{2}$

12. $\overline{KL}$ $-\frac{1}{5}$

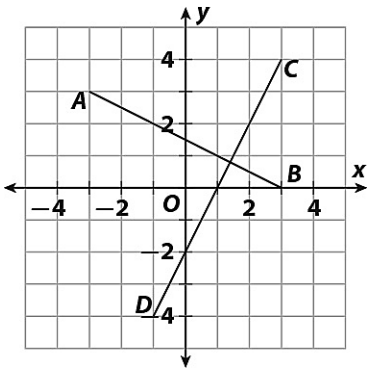
13. $\overline{LM}$ $\frac{3}{2}$

14. $\overline{MJ}$ $-\frac{1}{5}$

15. Is *JKLM* a parallelogram? Explain your reasoning.

    Yes because

Module 10.2 Practice



Find the slope.

16. Line segment $\overline{AB}$ $-\frac{3}{6}=-\frac{1}{2}$

17. Line segment $\overline{CD}$ $\frac{8}{4}=\frac{2}{1}$

18. Are $\overline{AB}$ and $\overline{CD}$ perpendicular? Explain your reasoning.

Yes because

Line *A* contains the points (-1, 5) and (1 ,-3). Line *B* contains the points (2, 3) and (-2, 2).

Find the slopes.

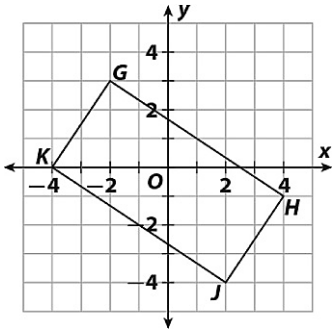
19. Line *A* $-\frac{8}{2}=-\frac{4}{1}$

20. Line *B* $\frac{1}{4}$

21. Are Line A and Line B perpendicular? Explain your reasoning.

Yes because

For Problems 22–27, use the graph.



22. Describe a method you can use to show that Figure *GHJK* is a rectangle.

A rectangle has 4 right angles so show that consecutive sides are perpendicular.

Find each slope.

23. $\overline{GH}$ $-\frac{4}{6}=-\frac{2}{3}$

24. $\overline{HJ}$ $\frac{3}{2}$

25. $\overline{JK}$ $-\frac{4}{6}=-\frac{2}{3}$

26. $\overline{KG}$ $\frac{3}{2}$

27. Is Figure *GHJK* a rectangle? Explain your reasoning.

Yes because

Figure *WXYZ* has as its vertices the points *W*(2, 7), *X*(5, 6), *Y*(5, –4), and *Z*(–1, –2). Find each slope.

28. $\overline{WX}$ $-\frac{1}{3}$

29. $\overline{XY}$ undefined

30. $\overline{YZ}$ $-\frac{2}{6}=-\frac{1}{3}$

31. $\overline{ZW}$ $\frac{9}{3}=\frac{3}{1}$

32. Is Figure *WXYZ* a rectangle? Explain your reasoning.

No because