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## Topic 2 Review

Find the slope of the line containing the given points.

1. $(5,2)$ and $(6,8)$
2. $(-6,1)$ and $(6,1)$
3. $(2,-4)$ and $(2,10)$
4. $(2,5)$ and $(6,3)$
5. ( $1,-2$ ) and $(3,4)$
6. $(3,-4)$ and $(-3,-3)$
7. Is the point $(2,3)$ on the line $y=4 x-5$ ? (Show your work.)
8. Is the point $(-1,6)$ on the line $y=3 x-3$ ? (Show your work.)

## Graph each line.

9. $y=\frac{-1}{2} x+2$

10. $3 y=2 x-12$

11. $y=\frac{2}{3} x-1$

12. $2 x+3 y=12$

13. $y=x-5$

14. $2 x-7 y=21$


An equation for a line is given. Find the $x$ - and $y$ - intercepts. Graph.
15. $x-4 y=8$
16. $2 x+3 y=12$



Give the equation of each line.
17.

18.

19.

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20. Write the equation for the line containing the point $(2,-5)$ that has slope of 3 .
21. Write the equation for the line containing the point $(6,-1)$ that has slope of $\frac{-1}{2}$.
22. Are the two lines $3 x-y=-7$ and $x+3 y=6$ parallel?
23. Find the equation of the line that passes through the point $(-2,-7)$ that has a slope of 3 .
24. Find the equation of the line that passes through the point $(1,0)$ that has a slope of $\frac{-2}{3}$
25. Find the equation of the line that passes through the point $(6,2)$ that has a slope of $\frac{2}{3}$
26. Find the equation of the line that passes through the points $(2,6)$ and $(-4,6)$
27. Find the equation of the line that passes through the points $(2,7)$ and $(-4,-5)$.
28. Find the equation of the line that passes through the points $(-4,-5)$ and $(6,0)$.

Cumulative Review:
Solve each for x .
29. $2(3 x+4)-3=(-13)$
30. $3 x-4=-6 x+14$
31. $\mathrm{ax}+4=10$
32. $\frac{3}{x+1}=\frac{7}{12}$
33. $\frac{2}{5} x+3=7$
34. $4 x+5=-12$

## Simplify each.

35. $3(2 x-5)-2(5 x-4)$
36. $2+2\left(3-2^{2} \cdot 5\right)+18$
37. $(-4)(-5)(-3)$
38. $2 x^{2}+4 x-5 x^{2}-7+4 x-19$
39. $3 x-4 y+2 y+7 y+16 x$
