

شكراً لتحميلك هذا الملف من موقع المناهج الإماراتية



مراجعة نهائية امتحانية وفق الهيكل الوزاري نخبة

موقع المناهج ← المناهج الإماراتية ← الصف الثامن ← رياضيات ← الفصل الأول ← الملف

التواصل الاجتماعي بحسب الصف الثامن



روابط مواد الصف الثامن على تلغرام

[الرياضيات](#)

[اللغة الانجليزية](#)

[اللغة العربية](#)

[التربية الاسلامية](#)

المزيد من الملفات بحسب الصف الثامن والمادة رياضيات في الفصل الأول

[حل أوراق عمل الوحدة الأولى الأعداد الحقيقية](#)

1

[كتاب الطالب Reveal ريفيل المحلد الأول](#)

2

[ملخص وشرح درس الأسس والقوى](#)

3

[حل أسئلة الامتحان النهائي بريدج](#)

4

[تجميع أسئلة مراجعة نهائية وفق الهيكل الوزاري نخبة](#)

5

Grade 8 - Elite

Mathematics – Final Exam

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موقع المناهج الإماراتية

Module	Lessons
2	1-4-5-6
3	1-3-5
4	1-3-5-6-7
5	2-4-6
6	4-5
7	3-4

Write an equation for each sentence.

1. Two added to three times a number m is the same as 18.
2. The product of five and the sum of a number x and three is twelve.
3. The quotient of 24 and x equals 14 minus 2 times x .
4. Nine times a number y subtracted from 85 is seven times the sum of four and y .

Translate each sentence into an equation or formula.

9. Twice a increased by the cube of a equals b .
10. Seven less than the sum of p and t is as much as 6.
11. The sum of x and its square is equal to y times z .
12. Four times the sum of f and g is identical to six times g .
13. The area A of a square is the length of a side ℓ squared.
14. The perimeter P of a triangle is equal to the sum of the lengths of sides a , b , and c .

Solve each equation. Check your solution.

7. $2(r + 6) = 4(r + 4)$

8. $6(n + 5) = 3(n + 16)$

9. $5(g + 8) - 7 = 117 - g$

10. $12 - \frac{4}{5}(x + 15) = \left(\frac{2}{5}x + 6\right)$

11. $3(3m - 2) = 2(3m + 3)$

12. $6(3a + 1) - 30 = 3(2a - 4)$

13. $7n + 6 = 4n - 9$

14. $-6(2r + 8) = -10(r - 3)$

15. $5 - 3(w + 4) = w - 7$

16. $2x - 5(x - 3) = 2(x - 10)$

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Solve each equation.

11. $|7 - 2q| = 3$

12. $|4x - 2| = 26$

13. $|w + 1| = 5$

14. $|n + 2| = -1$

15. $|m - 2| = 2$

16. $|5c - 3| = 1$

17. $|2t + 6| = 4$

18. $|8k - 5| = -4$

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Solve each proportion. If necessary, round to the nearest hundredth.

1. $\frac{3}{8} = \frac{15}{a}$

2. $\frac{t}{2} = \frac{6}{12}$

3. $\frac{4}{9} = \frac{13}{q}$

4. $\frac{15}{35} = \frac{g}{7}$

5. $\frac{7}{10} = \frac{m}{14}$

6. $\frac{8}{13} = \frac{v}{21}$

7. $\frac{w}{2} = \frac{4.5}{6.8}$

8. $\frac{1}{0.19} = \frac{12}{n}$

9. $\frac{2}{0.21} = \frac{8}{n}$

10. $\frac{2.4}{3.6} = \frac{k}{1.8}$

11. $\frac{t}{0.3} = \frac{1.7}{0.9}$

12. $\frac{7}{1.066} = \frac{z}{9.65}$

13. $\frac{x-3}{5} = \frac{6}{10}$

14. $\frac{7}{x+9} = \frac{21}{36}$

15. $\frac{10}{15} = \frac{4}{x-5}$

16. $\frac{6}{14} = \frac{7}{x-3}$

17. $\frac{7}{4} = \frac{f-4}{8}$

18. $\frac{3-y}{4} = \frac{1}{9}$

7. **HEALTH** The American Heart Association recommends that your target heart rate during exercise should be between 50% and 75% of your maximum heart rate. Use the data in the table below to graph the approximate maximum heart rates for people of given ages.

Source: American Heart Association

Age (years)	20	25	30	35	40
Maximum Heart Rate (beats per minute)	200	195	190	185	180

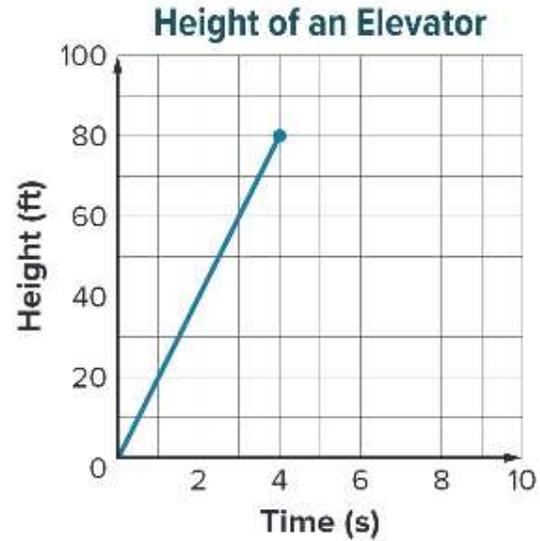
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8. **USE TOOLS** The following ordered pairs give the length in feet and the weight in pounds of five snakes at the reptile house at a zoo. Graph the data. $\{(5.5, 4.5), (3, 0.5), (3, 2), (8, 4.5), (2, 0.5)\}$

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9. **ELEVATOR** The height of an elevator above the ground is given in the table. Interpret the meaning of the axes, scale, and origin of the corresponding graph of the data.

Time (s)	Height (ft)
0	0
1	20
2	40
3	60
4	80



10. **SUPERMARKET** The number of items that eight customers bought at a supermarket and the total cost of the items is given in the table. Interpret the meaning of the axes, scale, and origin of the corresponding graph of the data.

Number of Items	Total Cost (\$)
2	2
3	6
5	8
5	10
6	16
8	12
8	18
9	14



If $f(x) = 3x + 2$ and $g(x) = x^2 - x$, find each value.

16. $f(4)$

17. $f(8)$

18. $f(-2)$

19. $g(2)$

20. $g(-3)$

21. $g(-6)$

22. $f(2) + 1$

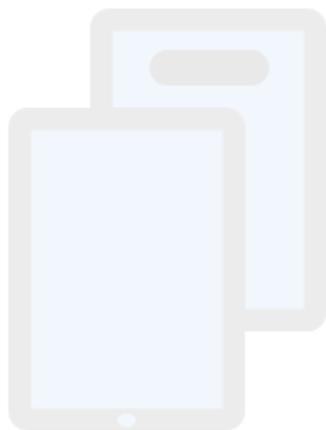
23. $f(1) - 1$

24. $g(2) - 2$

25. $g(-1) + 4$

26. $f(x) + 1$

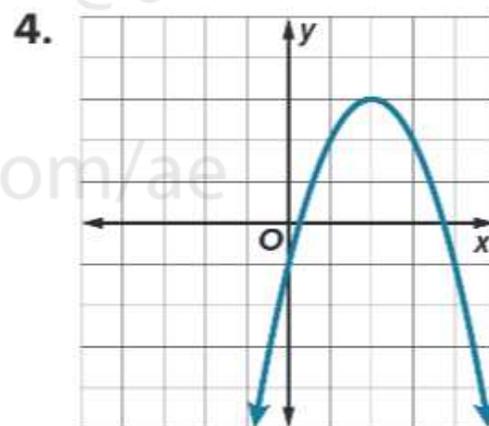
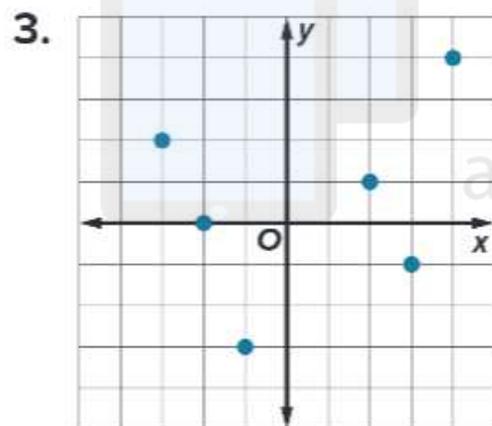
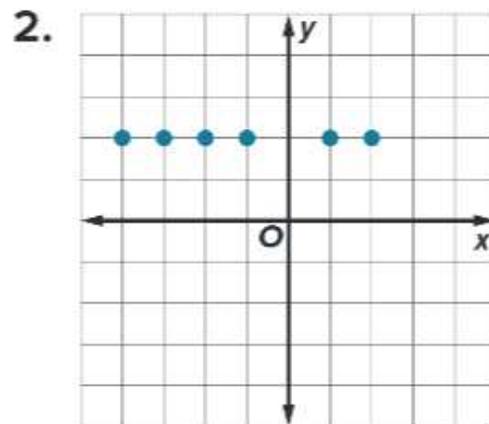
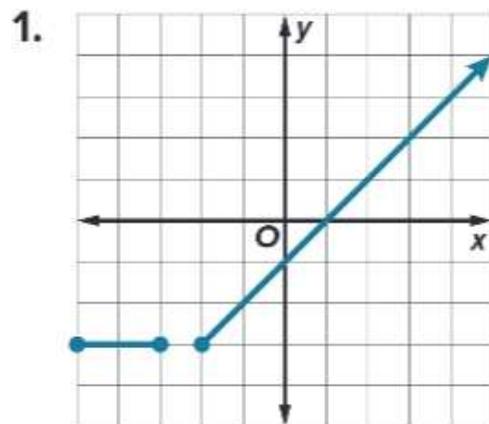
27. $g(3b)$



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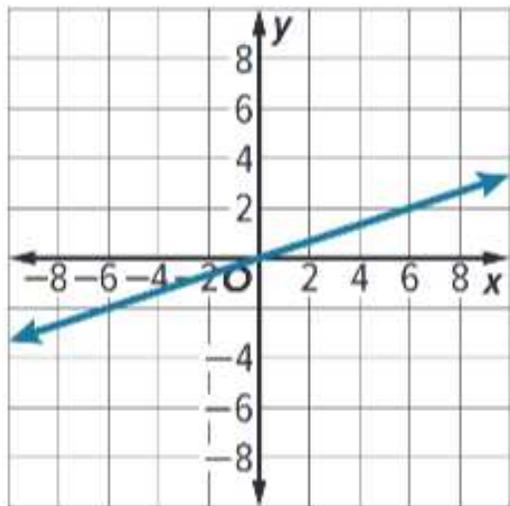
Determine whether the function is *discrete*, *continuous*, or *neither*. Explain.



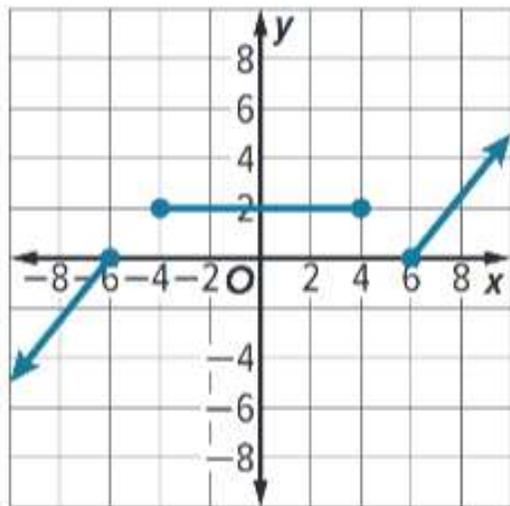
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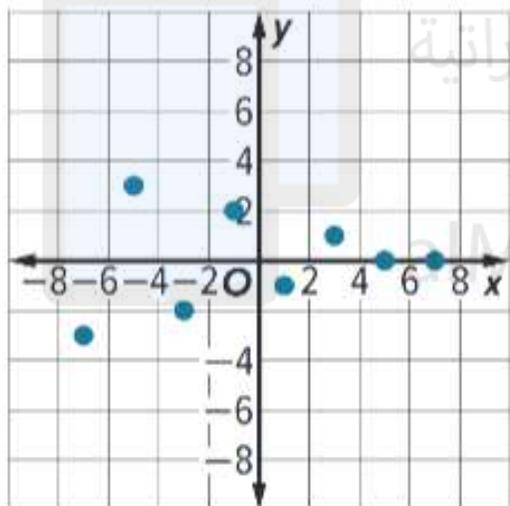
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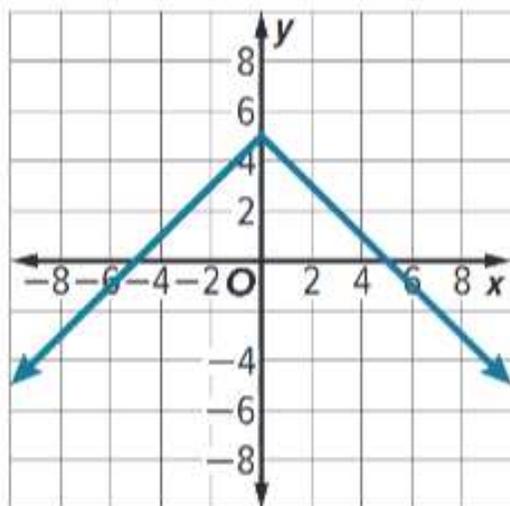
6.



7.



8.



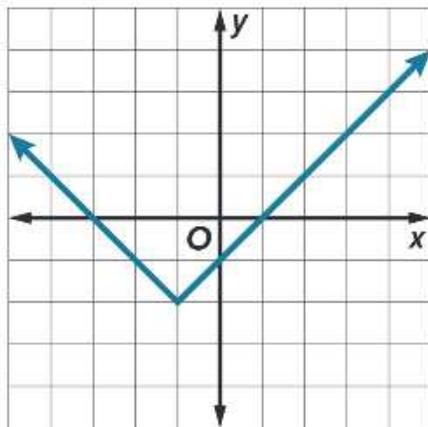
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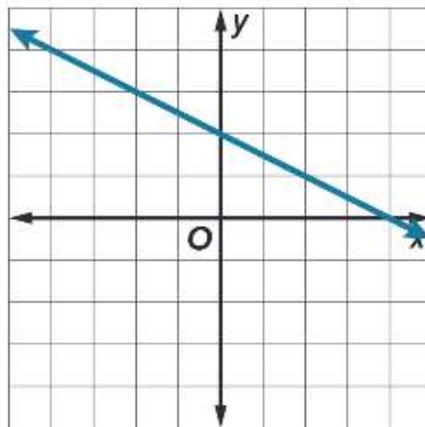
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Determine whether each function has line symmetry. Explain.

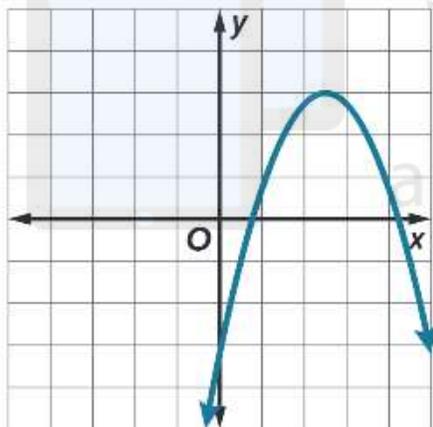
1.



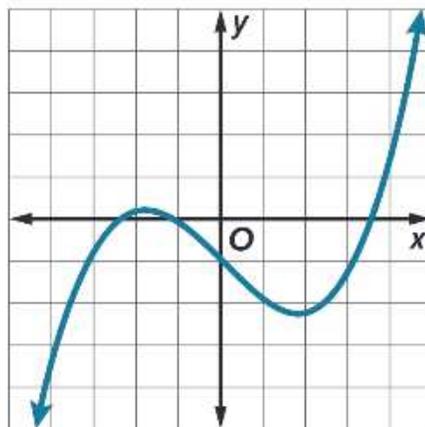
2.



3.



4.



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Find the x -intercept and y -intercept of the graph of each equation.

20. $5x + 3y = 15$

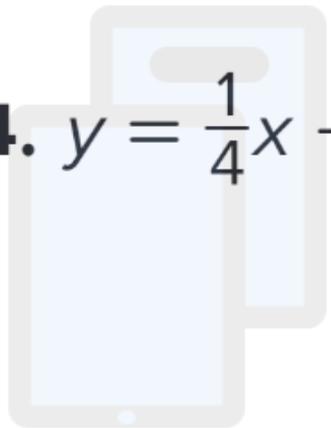
21. $2x - 7y = 14$

22. $2x - 3y = 5$

23. $6x + 2y = 8$

24. $y = \frac{1}{4}x - 3$

25. $y = \frac{2}{3}x + 1$



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Write an equation of a line in slope-intercept form with the given slope and y-intercept.

1. slope: 5, y-intercept: -3

2. slope: -2 , y-intercept: 7

3. slope: -6 , y-intercept: -2

4. slope: 7, y-intercept: 1

5. slope: 3, y-intercept: 2

6. slope: -4 , y-intercept: -9

7. slope: 1, y-intercept: -12

8. slope: 0, y-intercept: 8



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$$y = mx + b$$

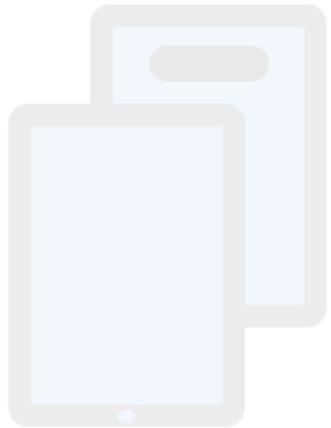
Graph a linear equation with the given slope and y -intercept.

19. slope: 5, y -intercept: 8

20. slope: 3, y -intercept: 10

21. slope: -4 , y -intercept: 6

22. slope: -2 , y -intercept: 8



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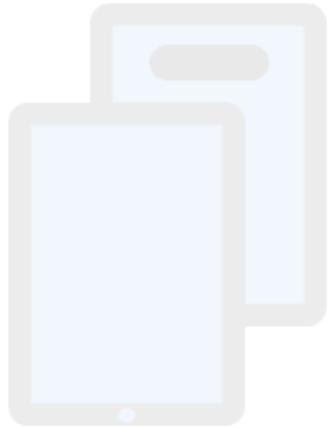
Use the given arithmetic sequence to write an equation and then find the 7th term of the sequence.

19. $-3, -8, -13, -18, \dots$

20. $-2, 3, 8, 13, \dots$

21. $-11, -15, -19, -23, \dots$

22. $-0.75, -0.5, -0.25, 0, \dots$



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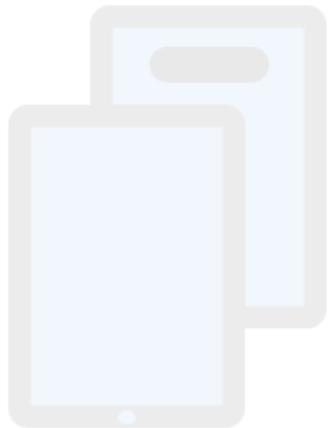
$$a_n = a_1 + (n - 1)d$$

Graph each function. State the domain and range.

$$1. f(x) = \begin{cases} \frac{1}{2}x - 1 & \text{if } x > 3 \\ -2x + 3 & \text{if } x \leq 3 \end{cases}$$

$$2. f(x) = \begin{cases} 2x - 5 & \text{if } x > 1 \\ 4x - 3 & \text{if } x \leq 1 \end{cases}$$

$$3. f(x) = \begin{cases} 2x + 3 & \text{if } x \geq -3 \\ -\frac{1}{3}x + 1 & \text{if } x < -3 \end{cases}$$



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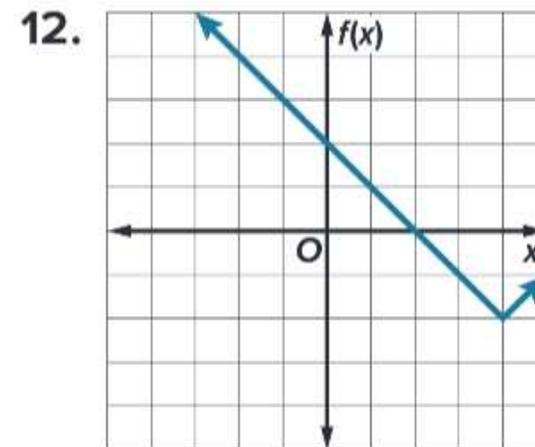
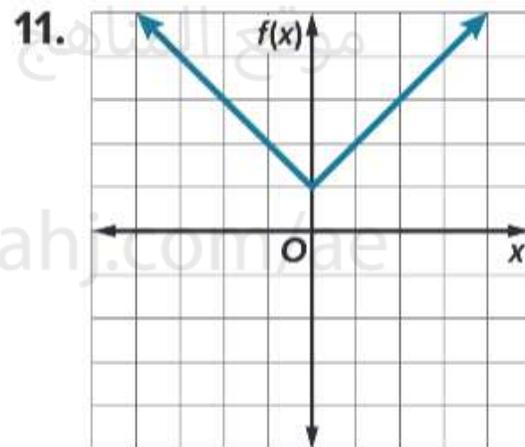
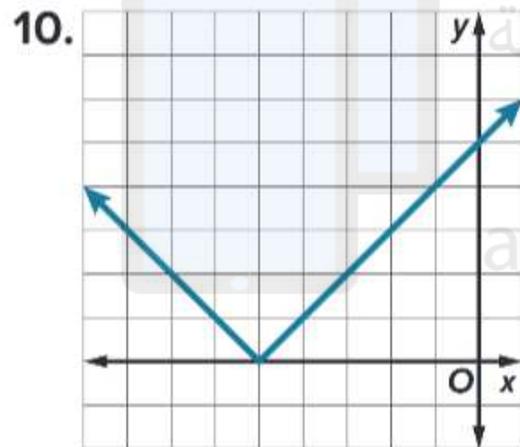
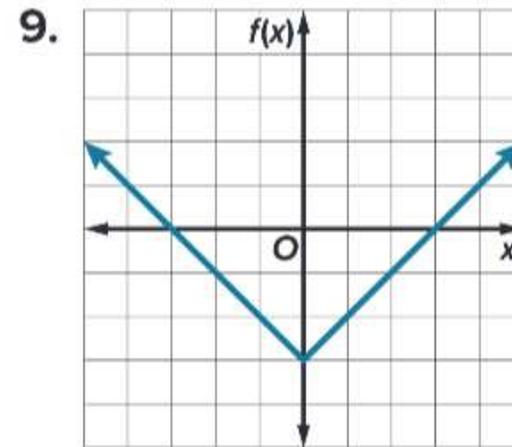
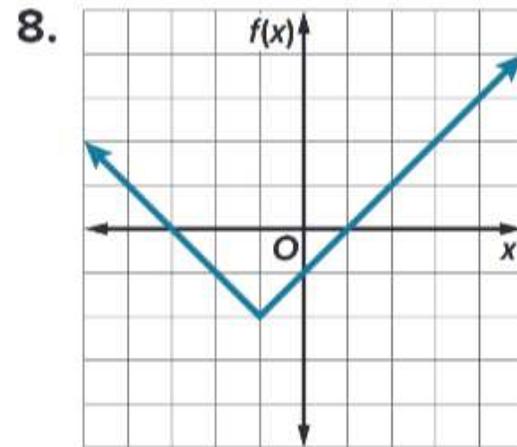
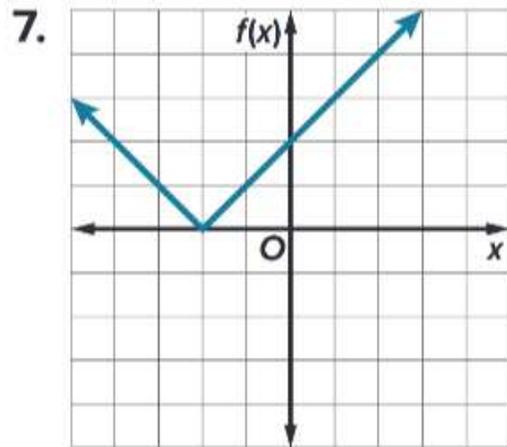
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$$4. f(x) = \begin{cases} 3x + 4 & \text{if } x \geq 1 \\ x + 3 & \text{if } x < 1 \end{cases}$$

$$5. f(x) = \begin{cases} 3x + 2 & \text{if } x > -1 \\ -\frac{1}{2}x - 3 & \text{if } x \leq -1 \end{cases}$$

$$6. f(x) = \begin{cases} 2x + 1 & \text{if } x < -2 \\ -3x - 1 & \text{if } x \geq -2 \end{cases}$$

Use the graph of the function to write its equation.



$$f(x) = |x|$$

Write an equation in slope-intercept form for the line that passes through the given point and is parallel to the graph of the equation. Then write an equation for the line that passes through the given point and is perpendicular to the graph of the equation.

25. $(3, -2)$; $y = x + 4$

26. $(4, -3)$; $y = 3x - 5$

27. $(0, 2)$; $y = -5x + 8$

28. $(-4, 2)$; $y = -\frac{1}{2}x + 6$

29. $(-2, 3)$; $y = -\frac{3}{4}x + 4$

30. $(9, 12)$; $y = 13x - 4$

Parallel: Same slope

Perpendicular: the product of their slope is -1

**Determine whether each situation illustrates a *correlation* or *causation*.
Explain your reasoning.**

3. A class experiment shows a negative correlation between the width of a person's palm and the amount of time they spend watching television each day.
4. The larger a person's shoe size, the higher a person's reading level.
5. At a grocery store, there is a negative correlation between the price of cereal and number of boxes of cereal sold.
6. Hae notices that the lower the daily temperature is, the less time she spends outside.

Find the inverse of each function.

16. $f(x) = 8x - 5$

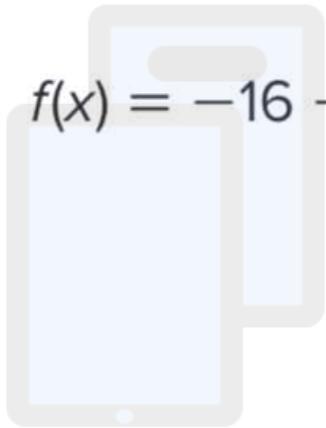
17. $f(x) = 6(x + 7)$

18. $f(x) = \frac{3}{4}x + 9$

19. $f(x) = -16 + \frac{2}{5}x$

20. $f(x) = \frac{3x + 5}{4}$

21. $f(x) = \frac{-4x + 1}{5}$



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Solve each inequality. Then graph the solution set.

1. $|x + 8| < 16$

2. $|r + 1| \leq 2$

3. $|2c - 1| \leq 7$

4. $|3h - 3| < 12$

5. $|m + 4| < -2$

6. $|w + 5| < -8$

7. $|r + 2| > 6$

8. $|k - 4| > 3$

9. $|2h - 3| \geq 9$

10. $|4p + 2| \geq 10$

11. $|5v + 3| > -9$

12. $|-2c - 3| > -4$

13. $|4n + 3| \geq 18$

14. $|5t - 2| \leq 6$

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Graph each inequality.

1. $y < x - 3$

2. $y > x + 12$

3. $y \geq 3x - 1$

4. $y \leq -4x + 12$

5. $6x + 3y > 12$

6. $2x + 2y < 18$

7. $5x + y > 10$

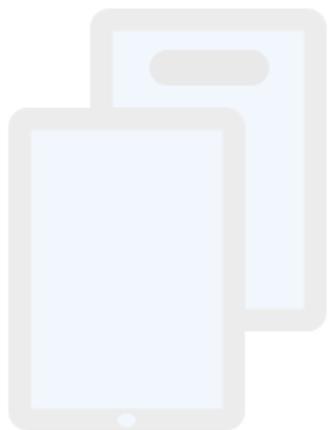
8. $2x + y < -3$

9. $-2x + y \geq -4$

10. $8x + y \leq 6$

11. $10x + 2y \leq 14$

12. $-24x + 8y \geq -48$



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- 28.** Twice a number added to another number is 15. The sum of the two numbers is 11. Find the numbers.
- 29.** Twice a number added to another number is -8 . The difference of the two numbers is 2. Find the numbers.
- 30.** The difference of two numbers is 2. The sum of the same two numbers is 6. Find the numbers.

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- 22. ANALYZE** Determine whether the following statement is *true* or *false*: *A system of linear equations will only have infinitely many solutions if the equations have the same coefficients.* Justify your argument.
- 23. CREATE** Write a system of equations that can be solved by multiplying one equation by -3 and then adding the two equations together.
- 24. PERSEVERE** The solution of the system $4x + 5y = 2$ and $6x - 2y = b$ is $(3, a)$. Find the values of a and b . Discuss the steps you used.
- 25. WRITE** Why is substitution sometimes more helpful than elimination, and vice versa?