Chapter 0 Practice Exercises (*Optional)

0-01 Solve Linear Equations and Inequalities

Solve the equation. Check your solution.

1. $x - 8 = 17$
2. $4x + 15 = 20$
3. $\frac{1}{2}x - \frac{5}{2} = 6$
4. $5x + 2 = -3x + 4$
5. $15 = 2(x + 5)$
6. $-3(x - 4) = 2(x + 10)$
7. $\frac{1}{3}(x + 5) = \frac{5}{6}$

Solve the inequality.

8. $2x - 3 < 0$
9. $3x > 5x - 10$
10. $-5x + 15 > 15$
11. $1 < 2(x + 12)$
12. $2 < 2x - 9 < 18$
13. $-3 < -6x < 21$
14. $3x < 6$ or $5x + 1 > 16$

Solve the equation or formula for the given variable.

15. Solve for r: $C = 2\pi r$
16. Solve for b: $A = \frac{1}{2}bh$
17. Solve for C: $F = \frac{9}{5}C + 32$
18. Solve for y. Then find the value of y when $x = 3$. $3x - 6y = 18$
19. Solve for c. Then find the value of c when $a = 3$ and $b = 4$. $ac - 2c = b$
20. Solve for z. Then find the value of z when $w = 5$. $3w + z < 20$
21. Solve for Q. Then find the value of Q when $R = 0$. $\frac{1}{2}(Q + 3R) - 2Q > 6R - 9$

Mixed Review: Write an expression to answer the question.

22. You have \$523 in your savings account. Then deposit D dollars. What is your new balance?
23. You buy C bags of candy for \$4.99 each. How much money did you spend?
24. A car travels m miles, stops, then travels n more miles. How far did the car travel in total?
25. There are s students in the class who turned in 21 papers. How many students did not turn in a paper?

0-02 Use Problem Solving Strategies and Models

Use the given formula to solve for the missing variable.

1. Distance/rate formula, $d = 15$ km, $r =$?, $t = 3$ h
2. Circumference of a circle, $C = 10\pi$, $r =$?
3. Area of a triangle, $A = 24$ in.^{2}, $b = 6$ in., $h =$?
4. Temperature, $F = 68$ °F, $C =$?

Use a formula to solve the following problems. Write the formula before you solve the problem.

5. You are creating a circular garden 15 feet across. You will use begonias to create a colorful design. Four begonia plants can be planted per square foot. How many begonia plants do you need to complete your garden?
6. During a physics lab, a formula requires the temperature in degrees Celsius, but all you have is a Fahrenheit thermometer which reads 185 °F. What is that temperature in Celsius?
7. Suzy participated in a 10 km run-walk. She walked at 5 km/h and ran at 8 km/h. If she took a total of 1.5 hours, how much time did she spend walking and running?

Find a pattern to solve the following problems. Describe the pattern.

8. A hang-glider's height data is given in the table. How high will the hang-glider be after 7 minutes?

Time (min)	0	1	2	3	4
Height (ft)	300	277	254	231	208

9. Water is evaporating from your small kiddie pool in your backyard. You measure the depth of the water every day after school. On which day will the pool be empty?

Time (day)	1	2	3	4
Depth (in.)	8	6.4	4.8	3.2

10. Exercising is typically good for you, so Abby and Ben have challenged each other to see who can get the most steps every day. The table shows their number of steps for the first several days. If this trend continues, on which day will Abby have twice as many steps as Ben?

Time (day)	1	2	3
Abby's Steps	4020	4032	4044
Ben's Steps	4010	3812	3614

Draw a diagram to solve the following problems. Draw the diagram.

11. Frank is designing a stained-glass window. The outside frame is a square. He connects the midpoints of each side to form another square. If the length of a side of the outside frame is 10 inches, how long is a side of the inner square to the nearest tenth of an inch?
12. Four friends are playing tug-o-war. Angela pulls to the left with 120 N of force. Bobbie pulls right with 130 N. Charlie also pulls right at 185 N, but Daniel tugs to the left with 190 N. Which team wins and by how much force do they win?

State which problem-solving strategy is best for each problem. Then solve the problem.

13. Jesus said, "Therefore go and make disciples of all nations… And surely I am with you always, to the very end of the age." Matthew 28:19-20.
If you make 2 disciples for Jesus and they each make 2 more disciples, the data for several generations is given in the table. How many generations until there are over 100 disciples?

Generations	1	2	3	4	5
Disciples	2	4	8	16	32

14. Water drains out of the St. Joseph river at about 3200 ft^3/s. How much water flows out of the river in 1 day?
15. Sally is making a picture collage. Part of it will have 4 evenly spaced pictures spread over 24 inches. Their widths are 3 in., 4 in., 5 in., and 5 in. She also wants 2 inches between the edges of the collage and the group of pictures. How far apart should Sally place the pictures?

Mixed Review

16. (0-01) Solve. $2x + 1 = 17$
17. (0-01) Solve. $3(x - 1) < 12$
18. (0-01) Solve. $-x - 1 > 13$
19. (0-01) Solve. $2(x + 1) = 5(x - 4)$
20. (0-01) Solve for y. $2x + 5y = 10$

0-03 Solve Absolute Value Equations and Inequalities

Solve the equation.

1. $|x + 7| = 10$
2. $|x - 2| = 8$
3. $|3x + 1| = 11$
4. $|x - 3| = 2x + 1$
5. $|2x - 7| = 3x$
6. $2|x + 1| = 4$

Solve the inequality.

7. $|x + 3| < 5$
8. $|x - 6| > 1$
9. $|2x + 1| \leq 7$
10. $|3x + 1| \geq 2$
11. $|3 - 2x| < x + 1$
12. $|3x + 4| \leq -1$

Tolerance Problems

13. Strawberries are sold in 16 oz. packages with a tolerance of ½ oz. Write and solve an absolute value inequality that describes the actual weights of the strawberry packages.
14. To grow good tomatoes, the pH, or acidity, of the soil should be 6.4 with a tolerance of 0.4. Write and solve an absolute value inequality that describes the actual pH of soils for growing tomatoes.

Mixed Review

15. (0-01) Solve $-3x + 2 < 11$
16. (0-01) Solve $2(x + 1) = 3(x - 5)$
17. (0-01) Solve $7(x + 1) = 7$

A theater has 40 rows with 20 seats in each row. If the first *n* rows cost \$30 per seat and the rest cost \$15 per seat, how much revenue does the theater earn when all the seats are sold?

18. (0-02) Which strategy is best to find the revenue: formula, pattern, or diagram?
19. (0-02) Use your chosen strategy to write an equation for the revenue. (Hint: It equation will include n.)
20. (0-02) If $n = 25$, what is the revenue of the theater with all the seats are sold?

0-04 Find Slope and Write Equations of Lines

Find the slope of the line passing through the given points. Classify as *rises*, *falls*, *horizontal*, or *vertical*.

1. (2, 6), (1, 7)
2. (−1, 0), (2, 5)
3. (7, 1), (7, 4)
4. (3, 2), (−5, 2)

Tell whether the lines are *parallel*, *perpendicular*, or *neither*.

5. Line 1: through (1, 2) and (3, 4)
   Line 2: through (−2, 4) and (−3, 3)

6. Line 1: through (0, 2) and (−5, 7)
   Line 2: through (−2, 3) and (0, 5)

7. Line 1: through (5, 5) and (1, 0)
   Line 2: through (1, 10) and (9, 0)

Write the equation of the line with the given information.

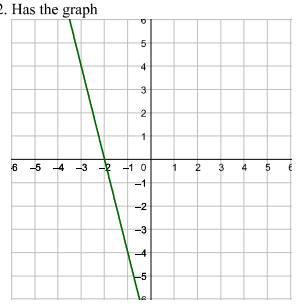
8. Slope = 3, passes through (0, 3)

9. Slope = −1, passes through (2, −1)

10. Passes through (3, 2) and (1, −2)

11. Passes through (2, 0) and (0, 4)

12. Has the graph



Problem Solving

13. Two points on a line are (1, 3) and (4, k). Find the value of k so that the slope is 2.

14. A hiker is climbing up a steep hill to an overlook. After 10 minutes he is at an altitude of 700 ft. Then at 30 minutes he is at 850 ft. What is the hiker's rate of change of altitude?

15. In the book of Jonah, he preached in Nineveh for 40 days. a) Read Jonah 1:1, why did God send Jonah to Nineveh? b) Read Jonah 3:3, how long did it take to walk through the city? (The population was estimated at 120,000.) c) Read Jonah 3:4, how long did Nineveh have before God would overthrow them? d) If Jonah preached for 40 days and converted 120,000 people, what is the rate of change of people?

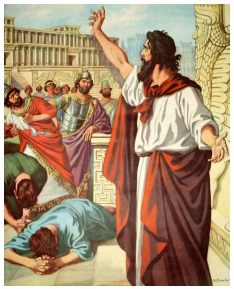


Figure 8: Jonah preaching at Nineveh (Otto Semler)

Mixed Review

16. (0-03) Cereal is sold by weight with a tolerance of 5% of the standard weight. Write and solve an absolute value inequality that describes the actual weights of a box of cereal labeled 14 oz.

17. (0-03) Solve: $|3x + 7| = 15$

18. (0-02) Joe has 50 feet of fence to go around his garden to keep rabbits out. The garden is 8 feet long. a) Which problem solving strategy will you use to find the width? b) Write an equation to solve for the width. c) Solve the equation.

19. (0-01) Solve for ℓ: $SA = \pi r^2 + \pi r\ell$

20. (0-01) Solve: $3(x + 1) \leq 7(x - 3)$

0-05 Graph Equations of Lines

Solve the equation for y.

1. $2x + y = 4$

Solve the equation for y, then graph it by making a table.

2. $x - 3y = 7$

Graph the equation. If necessary, solve for y first.

3. $y = x + 2$

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

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

6. $2x + y = -3$

7. $x - 2y = 5$

Find the x- and y-intercepts of the equation.

8. $3x + 2y = 12$

Graph by finding the intercepts of the equation.

9. $2x - 3y = 6$

10. $x + y = 4$

11. $4x - 5y = 20$

12. $y = -1$

13. $x = 2$

Problem Solving

14. The cost for a telephone call is 10 cents plus 5 cents per minute. This can be modeled by $C = 5t + 10$ where C is the cost of the call in cents and t is the time of the call in minutes. Graph the model.

Mixed Review

15. (0-04) Find the slope of the line through the points (−2, 4) and (3, −3).

16. (0-04) Find the equation of the line passing through (−2, 4) and (3, −3).

17. (0-04) During a long drenching rain, Sally decides to use a rain gauge to see how much rain is falling. At 1:00 PM her gauge reads 0.3 inches. At 3:00 PM it reads 1.8 inches. What is the rate that the rain is falling?

Figure 9: Rain gauge (NASA/Henry Reges/ CoCoRaHS HQ)

18. (0-03) Solve $|x + 5| = 8$.

19. (0-03) Solve $2|x - 2| \geq 0$.

20. (0-01) Solve $2(x - 1) = 4x$

0-06 Graph Absolute Value Functions and Transformations

The graph of $f(x)$ is given. a) Describe the transformations. b) Sketch the graph.

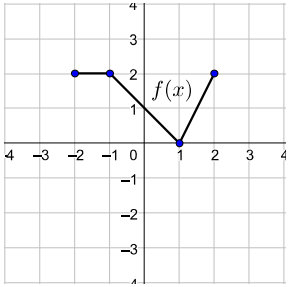


Figure 10

1. $3f(x)$

2. $-f(x)$

3. $f(x - 1) - 3$

4. $f(x + 2) + 3$

5. $2f(x) - 1$

a) Describe the transformation, then b) graph the absolute value function.

6. $f(x) = \frac{3}{2}|x|$

7. $g(x) = -|x|$

8. $h(x) = |x - 4| + 1$

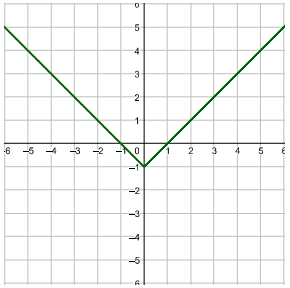
9. $y = |x + 2| - 1$

10. $y = \frac{1}{2}|x + 1|$

11. $y = -3|x - 1| - 2$

Write an absolute value function to model the graph.

12.



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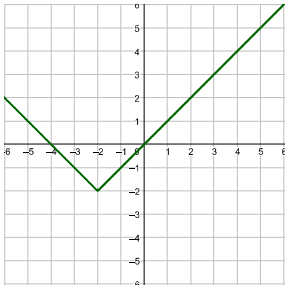
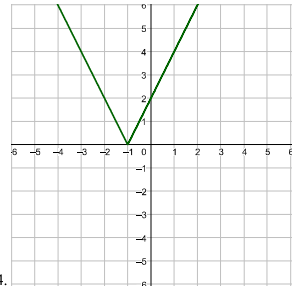


14. 

Mixed Review

15. (0-05) Graph $y = 2x - 1$.

16. (0-05) Graph $3x - y = 9$.

17. (0-04) Find the equation of the line passing through (2, 4) and (4, −1).

18. (0-03) Solve $\frac{1}{2}|3 - x| = 5$.

19. (0-02) The thermometer in the classroom reads 74 °F, but your friend from another country only understands temperature in °C. What is the temperature of your classroom in °C?

20. (0-01) Solve $3 < 2x + 1 \leq 11$

0-07 Graph Linear Inequalities

Graph the linear inequality.

1. $y \leq 3$

2. $x > 2$

3. $y \leq 2x + 1$

4. $y \geq \frac{2}{3}x - 2$

5. $y < -x + 3$

6. $y < -\frac{1}{2}x + \frac{3}{2}$

7. $2x + 3y \geq 6$

Graph the absolute value inequality.

8. $y > |x|$

9. $y \leq |x - 1| + 2$

10. $y < -\frac{1}{2}|x| + 3$

11. $y \geq 2|x - 1|$

Solve the real life problems.

12. Joe is buying his sister some books and toy cars for her birthday. The books cost \$3 each and cars cost \$1 each, and Joe only has up to \$20 to spend. a) Write an inequality describing the possible number of books and cars Joe can buy. b) Graph the inequality. c) Identify three possible solutions of the inequality.

13. Frank the mechanic can only work up to 8 hours per day. Changing oil takes 0.5 hours and changing tires takes 1.5 hours. a) Write an inequality describing the possible number of oil changes and tire changes Frank can do in a day. b) Graph the inequality. c) Identify three possible solutions of the inequality.

Mixed Review

14. (0-06) Graph $y = \frac{1}{2}|x + 1|$

15. (0-05) Graph $y = 4x - 1$

16. (0-05) Graph $3x - 6y = 12$

17. (0-04) Find the slope of the line that passes through (−3, 5) and (4, 6).

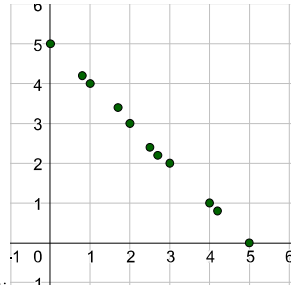
18. (0-04) Write the equation of the line that passes through (−3, 5) and (4, 6).

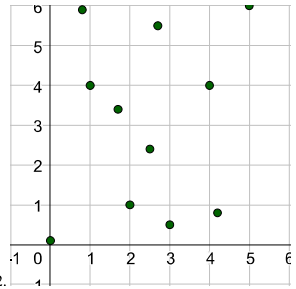
19. (0-04) Write the equation of the line that passes through (0, 3) and (2, 5).

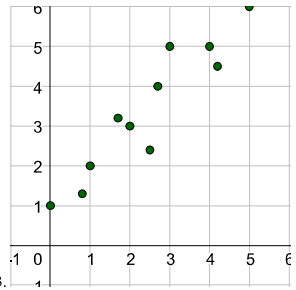
20. (0-03) Solve $0 = \frac{1}{2}|x + 1|$

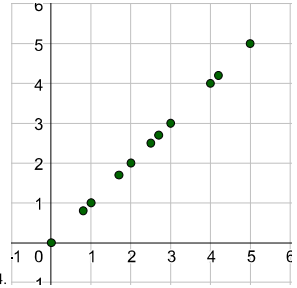
0-08 Draw Scatter Plots and Best-Fitting Lines

For each scatter plot, a) tell whether the data have a *positive correlation*, a *negative correlation*, or approximately *no correlation*, and b) tell whether the correlation coefficient is closest to −1, −0.5, 0, 0.5, or 1.

1. 

2. 

3. 

4. 

a) Draw a scatter plot using the data in the table, then b) tell whether the data have a *positive correlation*, a *negative correlation*, or approximately *no correlation*, and c) tell whether the correlation coefficient is closest to −1, −0.5, 0, 0.5, or 1.

5.

x	0	1	2	3	4	5
y	5	4.2	4.3	3.5	3.1	2.3

6. *

x	0.5	1	1.5	2	2.5	3	3.5	4
y	2	2.2	2.4	2.6	2.8	3	3.2	3.4

a) Draw a scatter plot using the data in the table, then b) write the equation of the best fitting line.

7.

x	0	0.5	1	1.5	2	2.5	3	3.5	4
y	1	1.6	2	2.4	3	3.6	4	4.4	5

8.

x	0	0.5	1	1.5	2	2.5	3	3.5	4
y	5	4.4	3.8	3.2	2.6	2	1.4	0.8	0.2

9.

x	0	0.5	1	1.5	2	2.5	3	3.5	4
y	2.1	2.3	2.5	2.7	2.9	3.1	3.3	3.5	3.7

10. *

x	0	0.5	1	1.5	2	2.5	3	3.5	4
y	5.8	5	4.2	3	1.8	1	0.2	−1	−2

Problem Solving

11. In a physics lab, Sarah is investigating the relationship between position, velocity, and time. She recorded her data of time, t in seconds, and position, x in meters, in the following table. **a)** Draw a scatter plot of her data and **b)** write the equation of the best fitting line. Use t for time and x for position. The slope is the velocity of the moving object.

t	0.05	0.10	0.15	0.20	0.25	0.30	0.35
x	0.05	0.10	0.16	0.22	0.27	0.33	0.37

12. Piping Plovers are small birds that live on sandy beaches in the United States. In 1985 they were put on the endangered species list. The following table gives the number of breeding pairs found on the Atlantic Coast. **a)** Draw a scatter plot of the data and **b)** write the

equation of the best fitting line. Use P for Plovers and t for years since 1985.

Piping Plover (Pixabay/cadop)

t	1	3	5	7	9	11	13	15	17	19	21	23	25
P	790	886	982	1013	1162	1364	1379	1437	1690	1658	1749	1849	1782

Mixed Review

13. *(0-07) Graph $y \le |x+1| - 3$.

14. (0-07) Graph $y > \frac{2}{3}x - 1$.

15. (0-06) **a)** Describe the transformation, then **b)** graph the absolute value function. $y = -|x-2| + 1$

16. *(0-05) Graph $y = -\frac{3}{2}x + 2$.

17. *(0-04) Write the equation of the line passing through (−2, 1) and (3, 4).

18. (0-03) Solve $|3x - 5| = 13$.

19. (0-02) **a)** Read 1 Kings 7:13. When King Solomon was building the temple, who did he hire for making the bronze things? **b)** Read 1 Kings 7:23. What was the circumference of the water vessel called "The Sea"? Give the answer in cubits. **c)** Use the internet to convert the answer from part b into feet. **d)** Using the answer from part c, what was the radius of The Sea in feet?

20. (0-01) Solve for y. $3x + 5y = 15$

0-Review

Take this test as you would take a test in class. When you are finished, check your work against the answers.

0-01

1. Solve $2x + 1 = 5x - 3$

2. Solve $2 < 2x + 1 < 5$

3. Solve for y: $3x + 5y = 8$

0-02

4. On Sabbath, Franklin's family likes to walk in the woods. If Franklin walks at a rate of 3.5 mph, how far can he walk in 2 hours?

5. A honey bee is collecting pollen from flowers. The table shows how many flowers, f, it has visited in t minutes. If the pattern continues, how many flowers will the bee visit in 8 minutes?

t (min)	1	2	3	4
f (flowers)	6	12	18	24

Bee (RW)

0-03

6. Solve $|2x + 1| = 7$

7. Solve $2|x - 6| = 10$

8. Solve $|7x - 1| < 15$

0-04

9. Find the slope of the line through (–2, 1) and (–5, 5).

10. Write the equation of the line with slope = 5 and passes through (7, 1).

11. Write the equation of the line that passes through (0, 7) and (3, –2).

0-05

12. Graph $y = \frac{2}{3}x - 2$.

13. Graph $y = -3x$.

14. Graph $3x - 4y = -12$.

0-06

15. Describe the transformation. $\frac{1}{3}f(x-2) + 4$

16. Graph $y = |x - 2| - 3$.

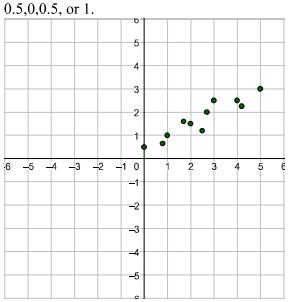
0-07

17. Graph $y > x$.

18. Graph $y \le \frac{1}{2}|x+1| + 2$.

0-08

19. For each scatter plot, **a)** tell whether the data have a *positive correlation*, a *negative correlation*, or approximately *no correlation*, and **b)** tell whether the correlation coefficient is closest to −1,–0.5,0,0.5, or 1.



20. Draw a scatter plot using the data in the table, then write the equation of the best-fitting line.

x	0	0.5	1	1.5	2	2.5	3	3.5	4
y	5	4.75	4.5	4.25	4	3.75	3.5	3.25	3

Answers

0-01

1. 25
2. $\frac{5}{4}$
3. 17
4. $\frac{1}{4}$
5. $\frac{5}{2}$
6. $-\frac{8}{5}$
7. $-\frac{5}{2}$
8. $x < \frac{3}{2}$
9. $x < 5$
10. $x < 0$
11. $x > -\frac{23}{2}$
12. $\frac{11}{2} < x < \frac{27}{2}$
13. $-\frac{7}{2} < x < \frac{1}{2}$
14. $x < 2$ or $x > 3$
15. $r = \frac{C}{2\pi}$
16. $b = \frac{2A}{h}$
17. $C = \frac{5}{9}(F - 32)$
18. $y = \frac{5}{2}x - 3; -\frac{3}{2}$
19. $c = \frac{8}{a-2}; 4$
20. $z < 20 - 3w; z < 5$
21. $Q < -3R + 6; Q < 6$
22. $523 + D$
23. $4.99C$
24. $m + n$
25. $s - 21$

0-02

1. 5 km/h
2. 5
3. 8 in.
4. 20 °C
5. 707 plants
6. 85 °C
7. 2/3 hr walking, 5/6 hr running
8. 139 ft
9. 6th day
10. 10th day
11. 7.1 in.
12. Bobbie and Charlie win by 5 N
13. 7 generations
14. 276,480,000 ft^3 of water
15. 1 in. apart
16. 8
17. $x < 5$
18. $x < -14$
19. $\frac{22}{3}$
20. $y = -\frac{2}{5}x + 2$

0-03

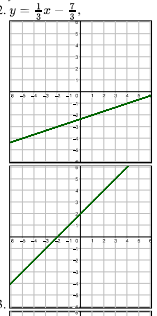
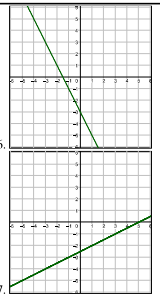
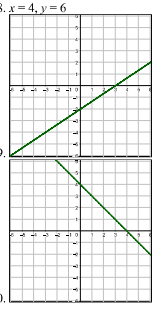
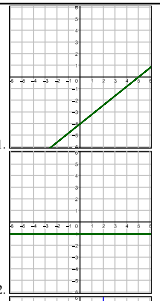
1. −17, 3
2. −6, 10
3. −4, $\frac{10}{3}$
4. $\frac{2}{3}$
5. $\frac{7}{5}$
6. −3, 1
7. $-8 < x < 2$
8. $x < 5$ or $x > 7$
9. $-4 \le x \le 3$
10. $x \le -1$ or $x \ge \frac{1}{3}$

11. $\frac{2}{3} < x < 4$
12. No solution
13. $|x - 16| \le \frac{1}{2}$; $15.5 \le x \le 16.5$
14. $|x - 6.4| \le 0.4$; $6.0 \le x \le 6.8$
15. $x > -3$
16. 17
17. 0
18. Diagram
19. $R = 300n + 12000$
20. $19500

0-04

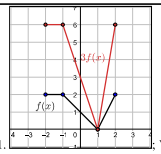
1. −1, falls
2. $\frac{2}{3}$, rises
3. No slope, vertical
4. 0, horizontal
5. Parallel
6. Perpendicular
7. Neither
8. $y = 3x + 3$
9. $y = -x + 1$
10. $y = 2x - 4$
11. $y = -2x + 4$
12. $y = -4x - 8$
13. 9
14. 7.5 ft/min
15. d) 3000 people/day
16. $|x - 14| \le 0.05(14)$; $13.3 \le x \le 14.7$
17. $-\frac{22}{3}, \frac{8}{3}$
18. Formula, $P = 2\ell + 2w$, 17 ft
19. $\ell = \frac{5A - \pi r^2}{\pi r}$
20. $x \ge 6$

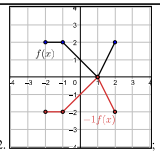
0-05

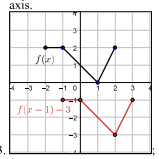
1. $y = -2x + 4$
2. $y = \frac{1}{3}x - \frac{7}{3}$,
3. 
4.
5.
6. 
7.
8. $x = 4, y = 6$
9. 
10.
11. 
12.
13.
14.

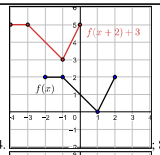
15. $m = -\frac{7}{5}$
16. $y = -\frac{7}{5}x + \frac{6}{5}$
17. 0.75 in./hr.
18. −13, 3
19. All real numbers
20. −1

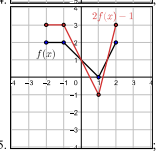
0-06

1. 

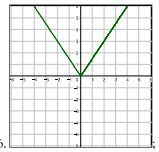
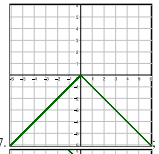
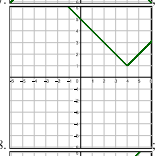
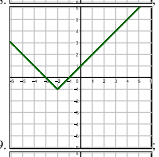
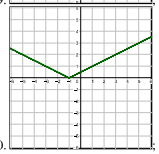
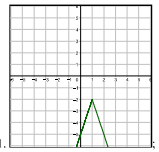
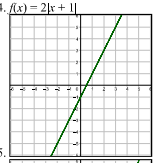
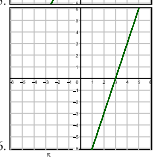
; Vertical stretch by factor of 3.
2. 

; Reflected over the *x*-axis.
3. 

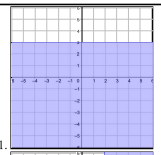
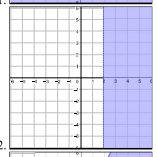
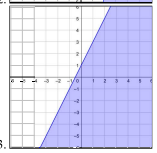
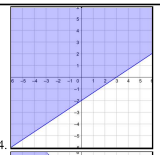
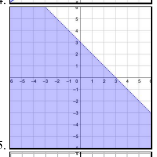
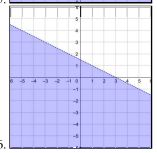
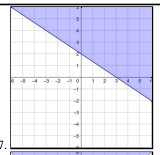
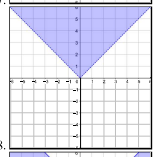
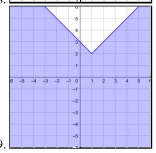
; Shift right 1 and down 3.
4. 

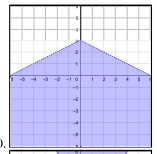
; Shift left 2 and up 3.
5. 

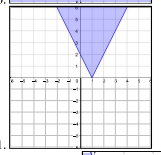
; Stretch by a factor of 2 and shift down 1.

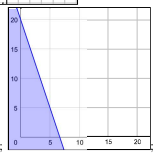
6. 
; Stretch by a factor of $\frac{3}{2}$.
7. 
; Reflect over the *x*-axis.
8. 
; Shift right 4 and up 1.
9. 
; Shift left 2 and down 1.
10. 
; Stretch by a factor of $\frac{1}{2}$ and shift left 1.
11. 
; Reflect over *x*-axis, stretch by a factor of 3, and shift right 1 and down 2.
12. $f(x) = |x| - 1$
13. $f(x) = |x + 2| - 2$
14. $f(x) = 2|x + 1|$
15. 
16. 
17. $y = -\frac{5}{2}x + 9$
18. −7, 13
19. 23.3 °C
20. $1 < x \le 5$

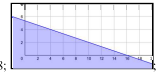
0-07

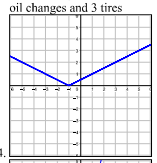
1. 
2. 
3. 
4. 
5. 
6. 
7. 
8. 
9. 

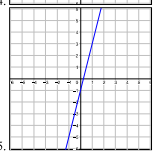
10. 

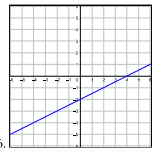
11. 

12. 
$3x + y \leq 20$; Sample: 3 books and 8 cars, 5 books and 1 car, 1 book and 14 cars

13. 
$0.5x + 1.5y \leq 8$; Sample: 11 oil changes and 1 tire, 2 oil changes and 4 tires, 7 oil changes and 3 tires

14. 

15. 

16. 

17. $\frac{1}{7}$

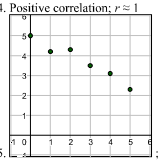
18. $y = \frac{1}{7}x + \frac{38}{7}$

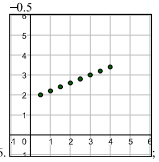
19. $y = x + 3$

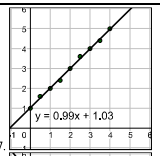
20. -1

0-08

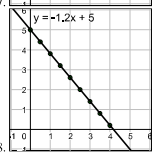
1. Negative correlation; $r \approx -1$
2. No correlation; $r \approx 0$
3. Positive correlation; $r \approx 0.5$
4. Positive correlation; $r \approx 1$


5. ; negative correlation; $r \approx -0.5$

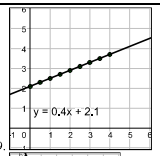

6. ; positive correlation; $r \approx 1$



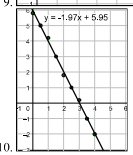
7.



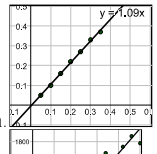
8.



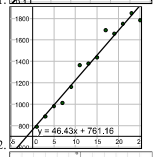
9.



10.



11.



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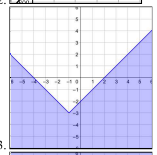
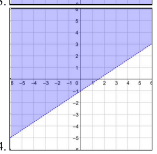
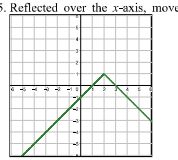
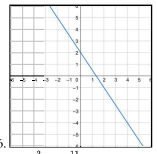

13.


14. Reflected over the x-axis, moved 2 right and 1 up;




16.

17. $y = \frac{3}{5}x + \frac{11}{5}$

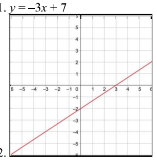
18. $-\frac{8}{3}$, 6

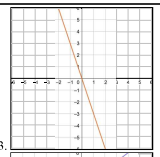
19. c) 45 feet, d) 7.16 ft

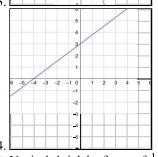
20. $y = -\frac{3}{5}x + 3$

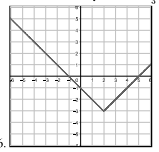
0-Review

1. $x = \frac{4}{3}$
2. $\frac{1}{2} < x < 2$
3. $y = -\frac{3}{5}x + \frac{8}{5}$
4. 7 miles
5. 48 flowers
6. $x = -4, 3$
7. $x = 1, 11$
8. $-2 < x < \frac{16}{7}$
9. $m = -\frac{4}{3}$
10. $y = 5x - 34$
11. $y = -3x + 7$

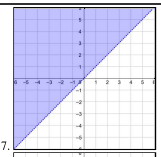

12.

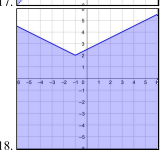

13.


14.

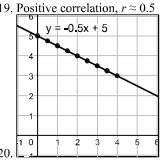

15. Vertical shrink by factor of $\frac{1}{3}$, move 2 right and 4 up

16.


17.


18.

19. Positive correlation, $r \approx 0.5$



20.