

ALEKS® FND M020 Review Pack #1

Pre-Algebra and Introductory Algebra / FND M020 Spring 16-FC4 – 29154-29268-
JohnsonT-04S1MATH03 (Mr. Thomas)

Student Name/ID:

1. A movie club surveyed 250 high school students. The students were asked how often they go to the movies and whether they prefer action movies or dramas. Their responses are summarized in the following table.

	Twice a month or less	Three times a month or more
Action	78	32
Drama	87	53

- (a) What percentage of the students go to the movies three times a month or more?
- (b) What percentage of the students prefer dramas ?

2. The price of an item has been reduced by 35%. The original price was \$91.

Use a calculator to find the price of the item now.

3. A suit is on sale for 33% off. The sale price is \$335.

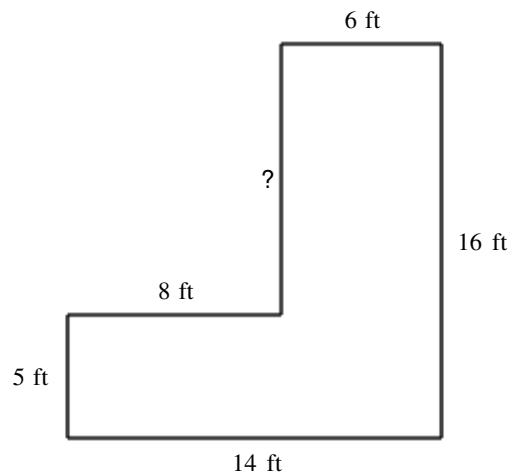
What is the regular price?

4. The price of a notebook was \$3.70 yesterday. Today, the price fell to \$3.20. Find the percentage decrease. Round your answer to the nearest tenth of a percent.

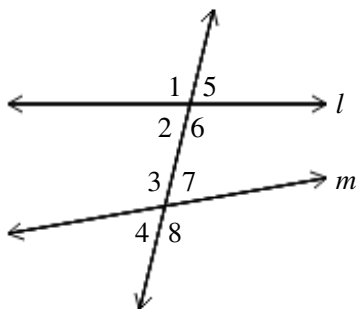
5. Find the missing side length.

Assume that all intersecting sides meet at right angles.

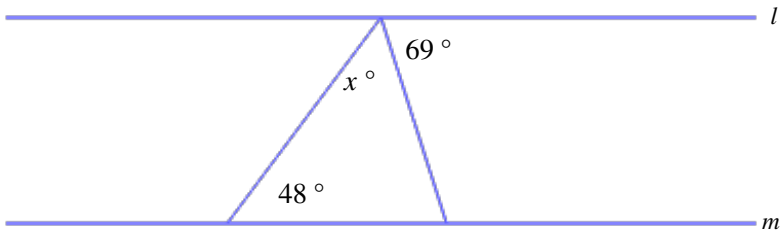
Be sure to include the correct unit in your answer.



6. Give one pair of supplementary angles and one pair of vertical angles shown in the figure below.



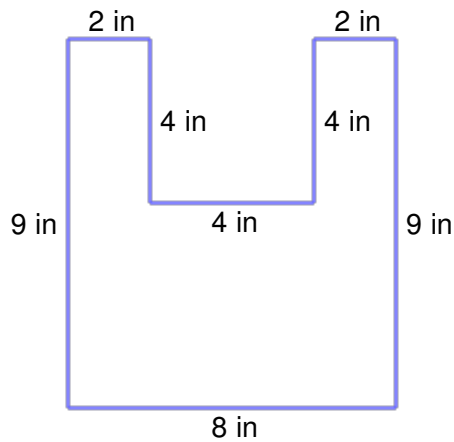
7. In the figure below, $l \parallel m$. Find x .



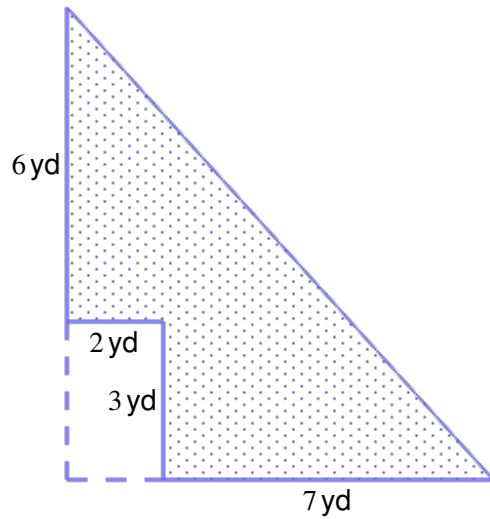
8. The radius of a circle measures 7 ft. What is the circumference of the circle?

Use 3.14 for π , and do not round your answer. Be sure to include the correct unit in your answer.

9. Find the area of the figure. (Sides meet at right angles.)

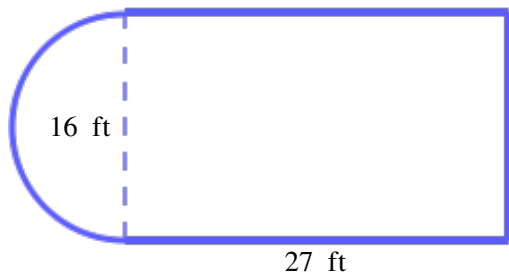


10. A rectangle is removed from a right triangle to create the shaded region shown below. Find the area of the shaded region. Be sure to include the correct unit in your answer.

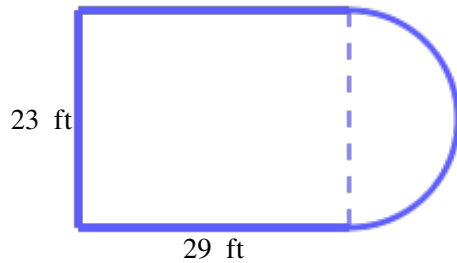


11. A rose garden is formed by joining a rectangle and a semicircle, as shown below. The rectangle is 27 ft long and 16 ft wide.

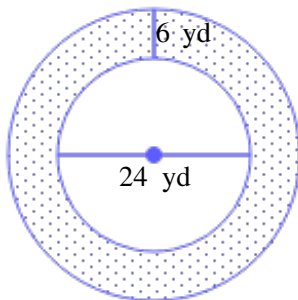
Find the area of the garden. Use the value 3.14 for π , and do not round your answer. Be sure to include the correct unit in your answer.



12. A rose garden is designed by joining a rectangle and a semicircle, as shown below. The rectangle is 29 ft long and 23 ft wide. If the gardener wants to build a fence around the garden, how many feet of fence are required? (Use the value 3.14 for π , and do not round your answer. Be sure to include the correct unit in your answer.)



13. At the park there is a pool shaped like a circle with diameter 24 yd. A ring-shaped path goes around the pool. Its width is 6 yd.

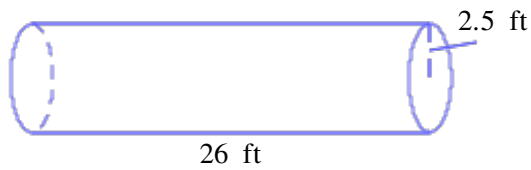


We are going to give a new layer of coating to the path. If one gallon of coating can cover 8 yd^2 , how many gallons of coating do we need? Note that coating comes only by the gallon, so the number of gallons must be a whole number. (Use the value 3.14 for π .)

14. The radius of a cylindrical construction pipe is 2.5 ft. If the pipe is 26 ft long, what is its volume?

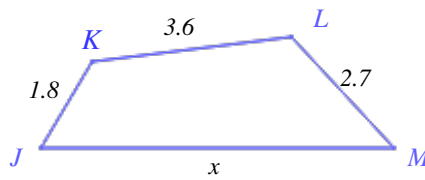
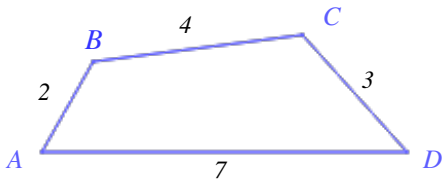
Use the value 3.14 for π , and round your answer to the nearest whole number.

Be sure to include the correct unit in your answer.



15. The quadrilaterals $ABCD$ and $JKLM$ are similar.

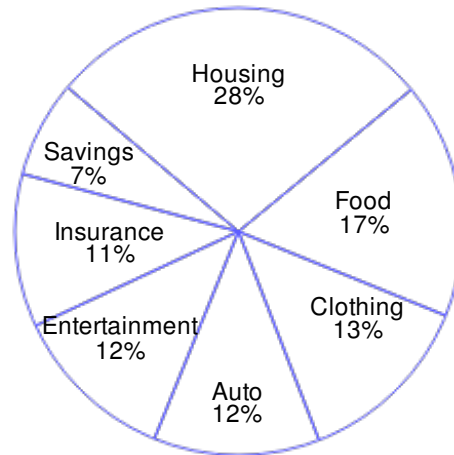
Find the length x of \overline{MJ} .



16. Leila went to a baseball game. The game started at 10 : 34 AM, and it was 3 hours 43 minutes long. When did the game end?

17. Jose rented a movie. He started the movie at 11 : 36 AM and it ended at 1 : 27 PM. How long was the movie?

18. The circle graph shows how a family spends its annual income. If \$67,500 is used for Food and Housing combined, what is the total annual income?



19. Simplify.

$$4(w - 3) - 8w$$

20. Simplify the following expression.

$$9x^2 - 4 - 10x^2 + 10 + 3x$$

21. Solve for u .

$$2(3u - 8) = 38$$

Simplify your answer as much as possible.

22. Solve for x .

$$-15.8 = -3.3 + \frac{x}{5}$$

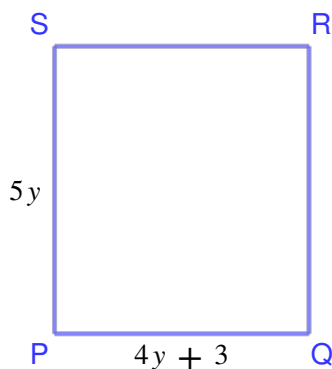
23. Translate the sentence into an equation.

Four times the difference of a number and 9 is equal to 8.

Use the variable x for the unknown number.

24. The perimeter of the rectangle below is 132 units. Find the length of side \overline{PS} .

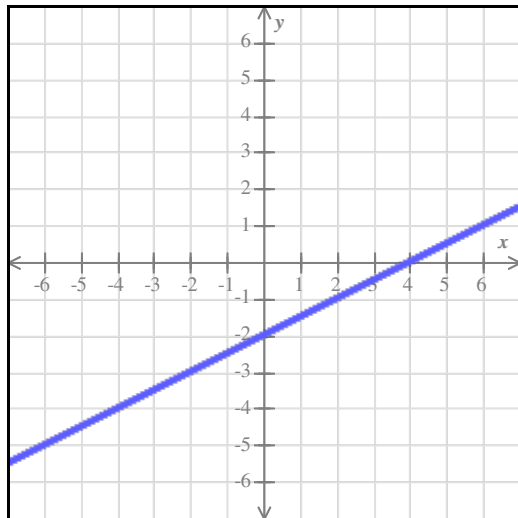
Write your answer without variables.



25. A washer and a dryer cost \$804 combined. The washer costs \$96 less than the dryer. What is the cost of the dryer?

26. The circumference of a circular field is 235.5 yards. What is the diameter of the field? Use 3.14 for π and do not round your answer.

27. Find the x -intercept and the y -intercept of the line below.



28. Solve the following system of equations.

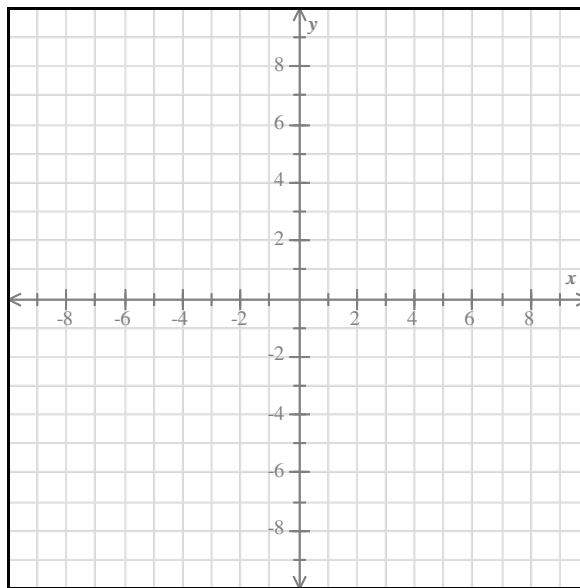
$$6x + 9y = -3$$

$$6x + 5y = 9$$

29. Lamar has scored 99, 71, 58, and 73 on his previous four tests. What score does he need on his next test so that his average (mean) is 79?

30. Graph the line.

$$y = 2x - 6$$



31. Simplify.

$$(-x^3z^4)^2(2x^2y^3z)$$

32. Simplify.

$$\frac{6u^4v^2}{18uv^2}$$

33. Answer the following.

- (a) A certain solution has a hydrogen ion concentration of 0.000165 moles per liter.
Write this number in scientific notation.
- (b) A fin whale can weigh up to 2.6×10^5 pounds. Write this number in standard notation.

34. Multiply.

$$(2c - 1)(5c - 7)$$

Simplify your answer.

FND M020 Review Pack #1 Answers for class Pre-Algebra and Introductory Algebra / FND M020 Spring 16-FC4 – 29154-29268-JohnsonT-04S1MATH03

1. (a) 34%

(b) 56%

2. \$59.15

3. \$500

4. 13.5%

5. 11 ft

6. Supplementary angles: $\angle 2$ and $\angle 6$

Vertical angles: $\angle 4$ and $\angle 7$

7. $x = 63$

8. 43.96 ft

9. 56 in^2

10. 34.5 yd^2

11. 532.48 ft^2

12. 117.11 ft

13. 71 gallons of coating

14. 510 ft^3

15. $x = 6.3$

16. 2 : 17 PM

17. 1 h 51 min

18. \$150,000

19. $-4w - 12$

20. $-x^2 + 3x + 6$

21. $u = 9$

22. $x = -62.5$

23. $4(x - 9) = 8$

24. $PS = 35$

25. \$450

26. 75 yards

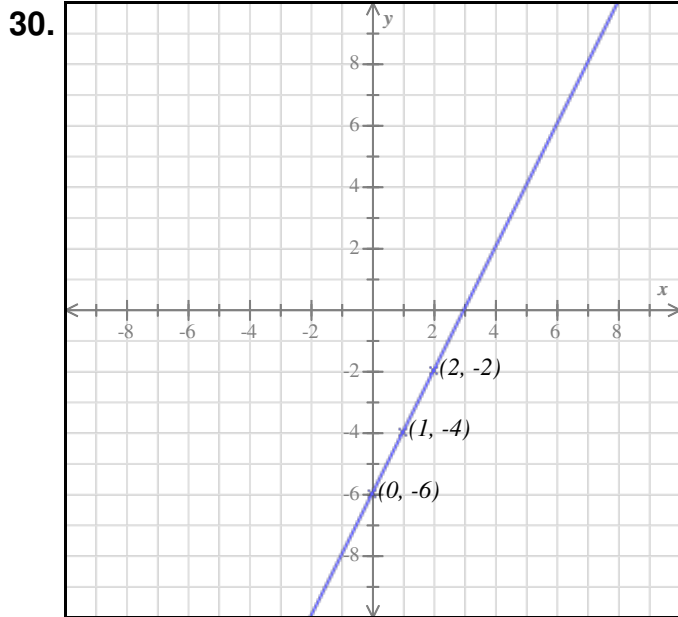
27. x -intercept: 4

y -intercept: -2

28. $x = 4$

$y = -3$

29. 94



31. $2x^8y^3z^9$

32. $\frac{u^3}{3}$

33. (a) 1.65×10^{-4} moles per liter

(b) 260,000 pounds

34. $10c^2 - 19c + 7$