

C H A P T E R

4



ACT Math Test Practice

► **Overview: About the ACT Math Test**

The 60-minute, 60-question ACT Math Test contains questions from six categories of subjects taught in most high schools up to the start of 12th grade. The categories are listed below with the number of questions from each category:

- Pre-Algebra (14 questions)
- Elementary Algebra (10 questions)
- Intermediate Algebra (9 questions)
- Coordinate Geometry (9 questions)
- Plane Geometry (14 questions)
- Trigonometry (4 questions)

Like the other tests of the ACT, the math test requires you to use your reasoning skills. Believe it or not, this is good news, since it generally means that you do not need to remember every formula you were ever

taught in algebra class. You will, however, need a strong foundation in all the subjects listed on the previous page in order to do well on the math test. You may use a calculator, but as you will be shown in the following lessons, many questions can be solved quickly and easily without a calculator.

Essentially, the ACT Math Test is designed to evaluate a student's ability to reason through math problems. Students need to be able to interpret data based on information given and on their existing knowledge of math. The questions are meant to evaluate critical thinking ability by correctly interpreting the problem, analyzing the data, reasoning through possible conclusions, and determining the correct answer—the one supported by the data presented in the question.

Four scores are reported for the ACT Math Test: Pre-Algebra/Elementary Algebra, Intermediate Algebra/Coordinate Geometry, Plane Geometry/Trigonometry, and the total test score.

► Pretest

As you did with the English section, take the following pretest before you begin the math review in this chapter. The questions are the same type you will find on the ACT. When you are finished, check the answer key on page 138 to assess your results. Your pretest score will help you determine in which areas you need the most careful review and practice. For a glossary of math terms, refer to page 201 at the end of this chapter.

1. If a student got 95% of the questions on a 60-question test correct, how many questions did the student complete correctly?
 - a. 57
 - b. 38
 - c. 46
 - d. 53
 - e. 95

2. What is the smallest possible product for two integers whose sum is 26?
 - f. 25
 - g. 15
 - h. 154
 - i. 144
 - j. 26

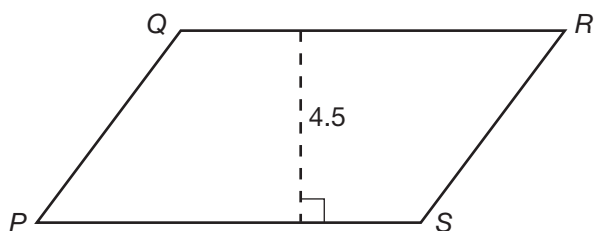
3. What is the value of x in the equation $-2x + 1 = 4(x + 3)$?

- a. $-\frac{6}{11}$
- b. 2
- c. $-\frac{11}{6}$
- d. -9
- e. $-\frac{3}{5}$

4. What is the y -intercept of the line $4y + 2x = 12$?

- f. 12
- g. -2
- h. 6
- i. -6
- j. 3

5. The height of the parallelogram below is 4.5 cm and the area is 36 sq cm. Find the length of side QR in centimeters.



- a. 31.5 cm
- b. 8 cm
- c. 15.75 cm
- d. 9 cm
- e. 6 cm

6. Joey gave away half of his baseball card collection and sold one third of what remained. What fraction of his original collection does he still have?

- f. $\frac{2}{3}$
- g. $\frac{1}{6}$
- h. $\frac{1}{3}$
- i. $\frac{1}{5}$
- j. $\frac{2}{5}$

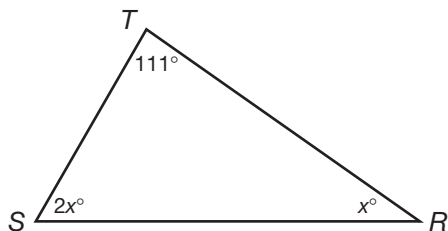
7. Simplify $\sqrt{40}$.

- a. $2\sqrt{10}$
- b. $4\sqrt{10}$
- c. $10\sqrt{4}$
- d. $5\sqrt{4}$
- e. $2\sqrt{20}$

8. What is the simplified form of $-(3x + 5)^2$?

- f. $9x^2 + 30x + 25$
- g. $-9x^2 - 25$
- h. $9x^2 + 25$
- i. $-9x^2 - 30x - 25$
- j. $-39x^2 - 25$

9. Find the measure of $\angle RST$ in the triangle below.



- a. 69
- b. 46
- c. 61
- d. 45
- e. 23

10. The area of a trapezoid is $\frac{1}{2}h(b_1 + b_2)$ where h is the altitude and b_1 and b_2 are the parallel bases. The two parallel bases of a trapezoid are 3 cm and 5 cm and the area of the trapezoid is 28 sq cm. Find the altitude of the trapezoid.

- f. 14 cm
- g. 9 cm
- h. 19 cm
- i. 1.9 cm
- j. 7 cm

11. If $9m - 3 = -318$, then $14m = ?$

- a. -28
- b. -504
- c. -329
- d. -584
- e. -490

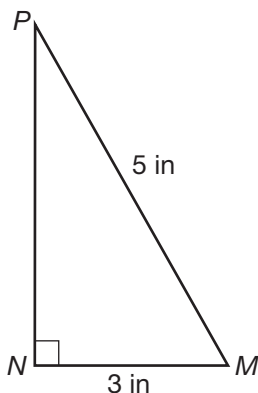
12. What is the solution of the following equation? $|x + 7| - 8 = 14$

- f. $\{-14, 14\}$
- g. $\{-22, 22\}$
- h. $\{15\}$
- i. $\{-8, 8\}$
- j. $\{-29, 15\}$

13. Which point lies on the same line as $(2, -3)$ and $(6, 1)$?

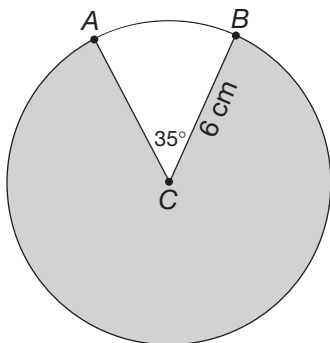
- a. $(5, -6)$
- b. $(2, 3)$
- c. $(-1, 8)$
- d. $(7, 2)$
- e. $(4, 0)$

14. In the figure below, $\overline{MN} = 3$ inches and $\overline{PM} = 5$ inches. Find the area of triangle MNP.



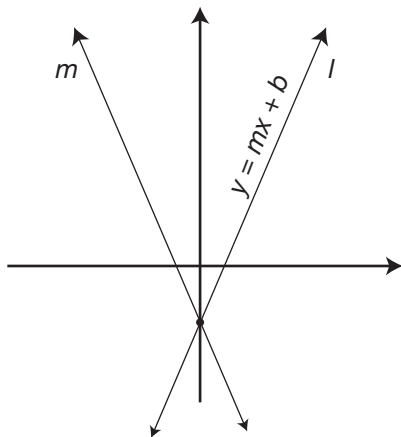
- f. 6 square inches
- g. 15 square inches
- h. 7.5 square inches
- i. 12 square inches
- j. 10 square inches

15. \overline{AC} and \overline{BC} are both radii of circle C and have a length of 6 cm. The measure of $\angle ACB$ is 35° . Find the area of the shaded region.



- a. $\frac{79}{2}\pi$
 b. $\frac{7}{2}\pi$
 c. 36π
 d. $\frac{65}{2}\pi$
 e. 4π
16. If $f(x) = 3x + 2$ and $g(x) = -2x - 1$, find $f(g(x))$.
- f. $x + 1$
 g. $-6x - 1$
 h. $5x + 3$
 i. $2x^2 - 4$
 j. $-6x^2 - 7x - 2$
17. What is the value of $\log_4 64$?
- a. 3
 b. 16
 c. 2
 d. -4
 e. 644

18. The equation of line l is $y = mx + b$. Which equation is line m ?



- f. $y = -mx$
 g. $y = -x + b$
 h. $y = 2mx + b$
 i. $y = \frac{1}{2}mx - b$
 j. $y = -mx + b$
19. If Mark can mow the lawn in 40 minutes and Audrey can mow the lawn in 50 minutes, which equation can be used to determine how long it would take the two of them to mow the lawn together?
- a. $\frac{40}{x} + \frac{50}{x} = 1$
 b. $\frac{x}{40} + \frac{x}{50} = 1$
 c. $\frac{1}{x} + \frac{1}{x} = 90$
 d. $50x + 40x = 1$
 e. $90x = \frac{1}{x}$
20. If $\sin\theta = \frac{2}{5}$, find $\cos\theta$.
- f. $\frac{5}{21}$
 g. $\sqrt{\frac{21}{5}}$
 h. $\frac{5}{3}$
 i. $\frac{3}{5}$
 j. $\sqrt{\frac{5}{21}}$

1. How is five hundred twelve and sixteen thousandths written in decimal form?
 - a. 512.016
 - b. 512.16
 - c. 512,160
 - d. 51.216
 - e. 512.0016

2. $4\frac{1}{3} - 1\frac{3}{4} = ?$
 - f. $2\frac{7}{12}$
 - g. $3\frac{5}{12}$
 - h. $3\frac{2}{3}$
 - i. $2\frac{5}{12}$
 - j. $1\frac{1}{8}$

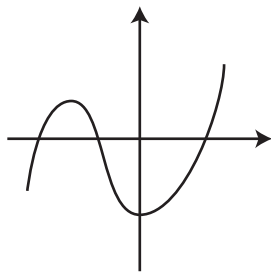
3. Simplify $|3 - 11| + 4 \times 2^3$.
 - a. 24
 - b. 40
 - c. 96
 - d. 520
 - e. 32

4. The ratio of boys to girls in a kindergarten class is 4 to 5. If there are 18 students in the class, how many are boys?
 - f. 9
 - g. 8
 - h. 10
 - i. 7
 - j. 12

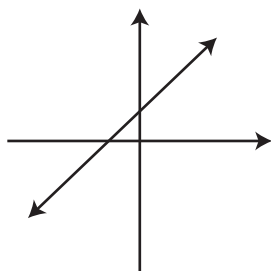
5. What is the median of 0.024, 0.008, 0.1, 0.024, 0.095, and 0.3?
 - a. 0.119
 - b. 0.095
 - c. 0.0595
 - d. 0.024
 - e. 0.092

6. Which of the following is NOT the graph of a function?

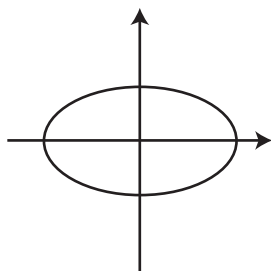
f.



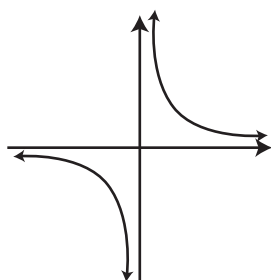
g.



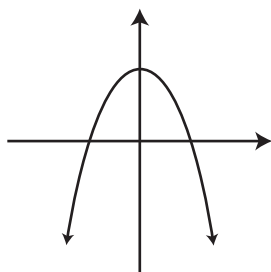
h.



i.



j.

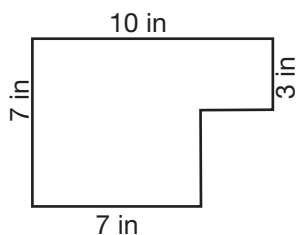


7. $4.6 \times 10^5 = ?$
- a. 4.60000
 - b. 0.000046
 - c. 4,600,000
 - d. 460,000
 - e. 0.0000046
8. What is the value of x^5 for $x = 3$?
- f. 15
 - g. 243
 - h. 125
 - i. $\frac{5}{3}$
 - j. 1.6
9. What is the next number in the pattern below?
0, 3, 8, 15, 24, ...
- a. 35
 - b. 33
 - c. 36
 - d. 41
 - e. 37
10. What is the prime factorization of 84?
- f. 42×2
 - g. $7 \times 2 \times 3$
 - h. $2^2 \times 3 \times 7$
 - i. $2 \times 6 \times 7$
 - j. $2^3 \times 7$
11. Find the slope of the line $7x = 3y - 9$.
- a. 3
 - b. -9
 - c. $\frac{7}{3}$
 - d. -3
 - e. $\frac{3}{7}$

12. The perimeter of a rectangle is 20 cm. If the width is 4 cm, find the length of the rectangle.

- f. 6 cm
- g. 16 cm
- h. 5 cm
- i. 12 cm
- j. 24 cm

13. Find the area of the figure below.



- a. 79 square inches
- b. 91 square inches
- c. 70 square inches
- d. 64 square inches
- e. 58 square inches

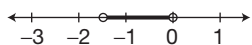
14. Five cans of tomatoes cost \$6.50. At this rate, how much will 9 cans of tomatoes cost?

- f. \$13.00
- g. \$11.70
- h. \$1.30
- i. \$11.90
- j. \$12.40

15. For all $x \neq 0$, $\frac{2}{3x} + \frac{1}{5} = ?$

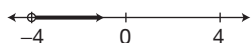
- a. $\frac{2}{15x}$
- b. $\frac{10 + 3x}{15 + x}$
- c. $\frac{10 + 3x}{15x}$
- d. $\frac{2}{15 + x}$
- e. $\frac{1}{5x}$

16. Which inequality best represents the graph below?



- f. $-1.5 > x > -1$
 - g. $x \leq 0$
 - h. $-0.5 > x > 0$
 - i. $-1.5 < x < 0$
 - j. $-1.5 \leq x \leq 0$
17. Simplify $-(6x^4y^3)^2$.
- a. $-36x^6y^5$
 - b. $36x^2y$
 - c. $-36x^8y^6$
 - d. $36x^8y^4$
 - e. $-36xy$
18. If $2x + 3y = 55$ and $4x = y + 47$, find $x - y$.
- f. 28
 - g. 16
 - h. 5
 - i. 12
 - j. 24

19. Which inequality represents the graph below?



- a. $-4x < 0$
 - b. $-20x > 5$
 - c. $x < -4$
 - d. $-x \leq -4$
 - e. $-x < 4$
20. Simplify $\sqrt[3]{16x^5y^4}$.
- f. $2xy\sqrt[3]{2x^2y}$
 - g. $8x^2y$
 - h. $8xy\sqrt[3]{2}$
 - i. $2xy\sqrt[3]{xy}$
 - j. $4x^2y^2\sqrt[3]{x}$

- 21.** The formula to convert Celsius to Fahrenheit is $F = \frac{5}{9}C + 32$, where F is degrees Fahrenheit, and C is degrees Celsius. What Fahrenheit temperature is equivalent to 63° Celsius?
- 32°
 - 95°
 - 67°
 - 83°
 - 47°
- 22.** What are the solutions to the equation $x^2 + 8x + 15 = 0$?
- $\{8, 15\}$
 - $\{0\}$
 - $\{-5, -3\}$
 - no solution
 - $\{2, 4\}$
- 23.** If $5k = 9m - 18$, then $m = ?$
- $5k + 18$
 - $\frac{5}{9}k + 2$
 - $-9 + 5k$
 - $5k + 9$
 - $9k + 18$
- 24.** What is the solution set for $5x - 7 = 5(x + 2)$?
- $\{2\}$
 - $\{7\}$
 - no solution
 - all real numbers
 - all positive numbers
- 25.** Simplify $\frac{4x^2 + 11x - 3}{x + 3}$ for all $x \neq -3$.
- $3x^2 + 11$
 - $2x + 1$
 - $4x^2 + 12x$
 - $4x^2 + 10x - 6$
 - $4x - 1$

26. If $x = \begin{bmatrix} 3 & 4 \\ 5 & 6 \end{bmatrix}$ and $y = \begin{bmatrix} -2 & 4 \\ -1 & 0 \end{bmatrix}$, find $x - y$.

f. $\begin{bmatrix} 5 & 0 \\ 6 & 6 \end{bmatrix}$

g. $\begin{bmatrix} 1 & 8 \\ 4 & 6 \end{bmatrix}$

h. $\begin{bmatrix} -5 & 0 \\ -6 & -6 \end{bmatrix}$

i. $\begin{bmatrix} 4 & 1 \\ 2 & 8 \end{bmatrix}$

j. $\begin{bmatrix} 6 & 1 \\ 2 & 5 \end{bmatrix}$

27. If $\log_3 x = 2$, then $x = ?$

a. 6

b. 9

c. $\frac{2}{3}$

d. 4

e. $\frac{1}{2}$

28. Simplify $\frac{x^2 - 9}{x - 3}$.

f. $x - 12$

g. $x - 6$

h. $x + 3$

i. $-x^2 - 6$

j. $x - 3$

29. The vertices of a triangle are $A(-1, 3)$, $B(3, 0)$, and $C(-2, -1)$. Find the length of side \overline{AC} .

a. $\sqrt{15}$

b. $\sqrt{17}$

c. 19

d. 17

e. $3\sqrt{6}$

30. Which of the following equations has a graph that has a y -intercept of 4 and is parallel to $3y - 9x = 24$?

f. $-12x + 4y = 16$

g. $9x - 3y = -15$

h. $2y = 4x + 8$

i. $7y = 14x + 7$

j. $3x - 9y = 14$

31. At what point do the lines $x = 9$ and $3x + y = 4$ intersect?

a. (3, 9)

b. $(\frac{5}{3}, 9)$

c. (-20, -9)

d. (9, -23)

e. (9, 4)

32. Which of the numbers below is the best approximation of $(\sqrt{37})(\sqrt{125})$?

f. 52

g. 4,600

h. 150

i. 66

j. 138

33. What is the solution set of the equation $x^2 - 4x - 4 = 2x + 23$?

a. $\{-4, 4\}$

b. $\{-4, 23\}$

c. $\{1, 11.5\}$

d. $\{-3, 9\}$

e. $\{5, 6\}$

34. If a fair coin is flipped and a die is rolled, what is the probability of getting tails and a 3?

f. $\frac{1}{2}$

g. $\frac{1}{12}$

h. $\frac{1}{6}$

i. $\frac{1}{4}$

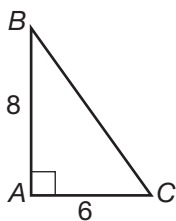
j. $\frac{1}{8}$

- 35.** What is $\frac{1}{2}\%$ of 90?
- a. 45
 - b. 0.045
 - c. 4.5
 - d. 0.45
 - e. 450
- 36.** Between which two integers does $\sqrt{41}$ lie?
- f. 5 and 6
 - g. 8 and 9
 - h. 4 and 5
 - i. 7 and 8
 - j. 6 and 7
- 37.** Mike has 12 bags of shredded cheese to use to make pizzas. If he uses $\frac{3}{4}$ of a bag of cheese for each pizza, how many pizzas can he make?
- a. 12
 - b. 24
 - c. 36
 - d. 9
 - e. 16
- 38.** Greene ran the 100-meter dash in 9.79 seconds. What was his speed in kilometers per hour (round to the nearest kilometer)?
- f. 31 km/h
 - g. 37 km/h
 - h. 1 km/h
 - i. 10 km/h
 - j. 25 km/h
- 39.** Larry has 4 blue socks, 6 red socks, and 10 purple socks in his drawer. Without looking, Larry randomly pulled out a red sock from the drawer. If Larry does not put the red sock back in the drawer, what is the probability that the next sock he randomly draws will be red?
- a. $\frac{1}{4}$
 - b. $\frac{3}{10}$
 - c. $\frac{5}{19}$
 - d. $\frac{3}{7}$
 - e. $\frac{1}{6}$

40. What is the product of 5×10^{-4} and 6×10^8 ?

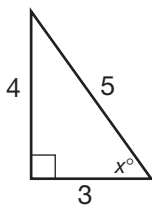
- f. 11×10^4
- g. 3×10^4
- h. 1.1×10^5
- i. 3×10^5
- j. 5.6×10^{-4}

41. What is the sine of angle B in the triangle below?



- a. $\frac{3}{4}$
- b. $\frac{3}{5}$
- c. $\frac{4}{3}$
- d. $\frac{4}{5}$
- e. $\frac{5}{4}$

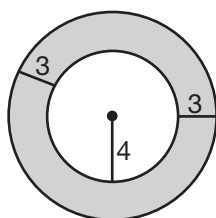
42. Find $\tan x$ for the right triangle below.



- f. $\frac{5}{4}$
- g. $\frac{3}{4}$
- h. $\frac{4}{3}$
- i. $\frac{6}{3}$
- j. $\frac{5}{3}$

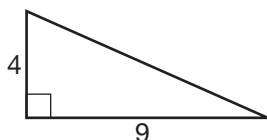
- 43.** The surface area of a box is found by taking the sum of the areas of each of the faces of the box. Find the surface area of a box with dimensions 6 inches by 8 inches by 10 inches.
- 480 sq in
 - 138 sq in
 - 346 sq in
 - 376 sq in
 - 938 sq in

- 44.** Find the area of the shaded region. Recall that the area of a circle is πr^2 , where r is the radius of the circle.



- 65π
 - 6π
 - 25π
 - 5π
 - 33π
- 45.** The area of square WXYZ is 100 square centimeters. Find the length of diagonal WY in centimeters.
- $10\sqrt{2}$ cm
 - 20 cm
 - 10 cm
 - $2\sqrt{5}$ cm
 - $10\sqrt{5}$ cm

- 46.** Find the hypotenuse of the triangle below.

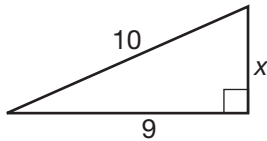


- $\sqrt{13}$
- $\sqrt{5}$
- $\sqrt{65}$
- $\sqrt{97}$
- 13

- 47.** A circular lid to a jar has a radius of $3\frac{1}{2}$ inches. Find the area of the lid.
- $\frac{12}{49}\pi$ sq in
 - $\frac{49}{12}\pi$ sq in
 - $\frac{49}{4}\pi$ sq in
 - $\frac{7}{2}\pi$ sq in
 - $\frac{4}{49}\pi$ sq in
- 48.** What is the value of x when y is equal to 15 for the equation $y = 4x^2 - 1$?
- 2
 - 16
 - 64
 - $\sqrt{5}$
 - 0
- 49.** The senior class at Roosevelt High has 540 students. Kristen won the election for class president with 60% of the vote. Of that 60%, 75% were female. Assuming that the entire senior class voted, how many females voted for Kristen?
- 195
 - 405
 - 324
 - 227
 - 243
- 50.** If $\cos\theta = \frac{6}{17}$ and $\tan\theta = \frac{5}{6}$, then $\sin\theta = ?$
- $\frac{5}{17}$
 - $\frac{6}{5}$
 - $\frac{17}{5}$
 - $\frac{5}{6}$
 - $\frac{1}{2}$
- 51.** The formula for the volume of a rectangular solid is $V = lwh$. If each dimension is tripled, how many times the original volume will the new volume be?
- 3
 - 9
 - $\frac{1}{3}$
 - 27
 - 81

- 52.** In a right triangle, the two non-right angles measure $7x$ and $8x$. What is the measure of the smaller angle?
- f. 15°
 - g. 60°
 - h. 30°
 - i. 48°
 - j. 42°

- 53.** What is the length of the missing leg in the right triangle below?



- a. $\sqrt{181}$
 - b. 1
 - c. $\sqrt{19}$
 - d. 4
 - e. $\sqrt{21}$
- 54.** The length of a rectangle is twice the width. If the perimeter of the rectangle is 72 feet, what is the length of the rectangle?
- f. 12 feet
 - g. 6 feet
 - h. 36 feet
 - i. 48 feet
 - j. 24 feet
- 55.** The area of a triangle is 80 square inches. Find the height if the base is 5 inches more than the height.
- a. $\frac{1 + \sqrt{629}}{2}$
 - b. $\frac{-9 \pm \sqrt{5}}{2}$
 - c. $4 \pm \sqrt{85}$
 - d. $5 - \sqrt{665}$
 - e. $\frac{-5 + \sqrt{665}}{2}$

- 56.** Three of the vertices of a square are $(-2, 3)$, $(5, 3)$, and $(-2, -4)$. What is the length of a side of the square?
- f. 5
 - g. 4**
 - h. 3
 - i. 7
 - j. 8
- 57.** Which of the following lines is perpendicular to $y = 3x + 1$?
- a. $6x + 5 = 2y$
 - b. $4 + y = 3x$
 - c. $-9y = -3 + 2x$
 - d. $2x + y = 4$**
 - e. $3y + x = 5$
- 58.** Which statement best describes the lines $-2x + 3y = 12$ and $-60 + 15y = 10x$?
- f. the same line
 - g. parallel**
 - h. skew
 - i. perpendicular
 - j. intersect at one point
- 59.** What is the midpoint of \overline{XY} if $X(-4, -2)$ and $Y(3, 8)$?
- a. $(-7, 6)$
 - b. $(-0.5, 3)$
 - c. $(-1, 6)$
 - d. $(-7, -10)$**
 - e. $(2, -1.5)$
- 60.** $\frac{4}{3x} + \frac{x-1}{5} = ?$
- f. $\frac{x+3}{15x}$
 - g. $\frac{x+3}{8x}$**
 - h. $\frac{x+3}{3x+5}$
 - i. $\frac{3x^2 - 3x + 20}{15x}$
 - j. $\frac{x^2 + 4x - 1}{15x}$

61. Simplify $(\frac{1}{2x^2})^{-3}$.

- a. $6x^6$
- b. $8x^6$
- c. $\frac{1}{6x^6}$
- d. $\frac{3}{8x^5}$
- e. $\frac{1}{8x^5}$

62. If $4x = 3y + 15$ and $2y - x = 0$, find x .

- f. 6
- g. 3
- h. 2
- i. -1
- j. 5

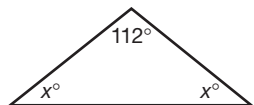
63. Simplify $36^{-\frac{3}{2}}$.

- a. -6
- b. -216
- c. -12
- d. $\frac{1}{216}$
- e. $-\frac{1}{216}$

64. If $x^3 = -50$, the value of x is between which two integers?

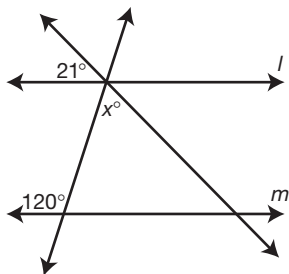
- f. 3 and 4
- g. 7 and 8
- h. -3 and -4
- i. -2 and -3
- j. -7 and -8

65. Find the value of x .



- a. 25°
- b. 136°
- c. 112°
- d. 68°
- e. 34°

66. Line l is parallel to line m . Find the measure of angle x .



- f. 99°
- g. 39°
- h. 21°
- i. 121°
- j. 106°

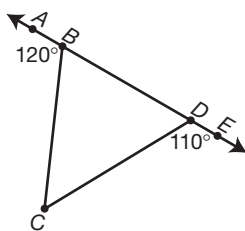
67. Find the radius of the circle with center $(4, -2)$ that is tangent to the y -axis.

- a. 2
- b. 6
- c. 1
- d. 4
- e. 10

68. Find the area, in square units, of the circle represented by the equation $(x - 5)^2 + (y - 2)^2 = 36$.

- f. 6π
- g. 36π
- h. 25π
- i. -2π
- j. 4π

69. $m\angle ABC = 120^\circ$ and $m\angle CDE = 110^\circ$. Find the measure of $\angle BCD$.



- a. 70°
- b. 50°
- c. 60°
- d. 150°
- e. 40°

- 70.** The ratio of the side lengths of a right triangle is $1:1:\sqrt{2}$. Find the sine of the smallest angle.
- f. $\frac{1}{2}$
 - g. $\frac{\sqrt{2}}{2}$
 - h. $\sqrt{2}$
 - i. 1
 - j. 2
- 71.** What is the minimum value of $9\cos x$?
- a. 9
 - b. 0
 - c. -90
 - d. -2
 - e. -9
- 72.** A triangle with angles measuring 30° , 60° , and 90° has a smallest side length of 7. Find the length of the hypotenuse.
- f. 14
 - g. $7\sqrt{3}$
 - h. 2
 - i. 12
 - j. 18
- 73.** The Abrams' put a cement walkway around their rectangular pool. The pool's dimensions are 12 feet by 24 feet and the width of the walkway is 5 feet in all places. Find the area of the walkway.
- a. 748 square feet
 - b. 288 square feet
 - c. 460 square feet
 - d. 205 square feet
 - e. 493 square feet
- 74.** Triangle XYZ is an equilateral triangle. \overline{YW} is an altitude of the triangle. If \overline{YX} is 14 inches, what is the length of the altitude?
- f. $7\sqrt{3}$ inches
 - g. 7 inches
 - h. $7\sqrt{2}$ inches
 - i. $6\sqrt{3}$ inches
 - j. 12 inches

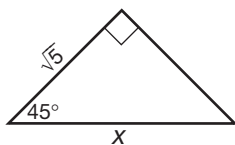
75. What is the sum of the solutions to the equation $2x^2 = 2x + 12$?

- a. 4
- b. 7
- c. 1
- d. 9
- e. -1

76. Find the value of $\sin A$ if angle A is acute and $\cos A = \frac{9}{10}$.

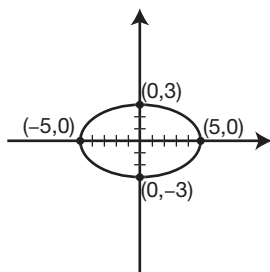
- f. $\frac{\sqrt{11}}{10}$
- g. $\frac{5}{4}$
- h. $\frac{10}{9}$
- i. $\frac{19}{100}$
- j. $\frac{\sqrt{19}}{10}$

77. Find the value of x .



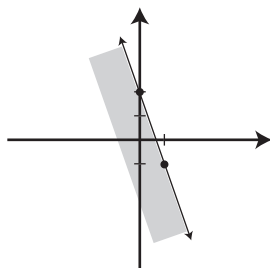
- a. 2
- b. 1
- c. $\sqrt{7}$
- d. $\sqrt{10}$
- e. $2\sqrt{5}$

78. Which equation corresponds to the graph below?



- f. $\frac{x^2}{25} + \frac{y^2}{9} = 1$
- g. $25x^2 + 9y^2 = 1$
- h. $\frac{x^2}{25} - \frac{y^2}{9} = 1$
- i. $\frac{y^2}{25} + \frac{x^2}{9} = 1$
- j. $5x^2 + 3y^2 = 3$

79. What is the inequality that corresponds to the graph below?



- a. $y > 3x + 2$
 - b. $y \leq -3x + 2$
 - c. $y \geq -3x + 2$
 - d. $y < 3x + 2$
 - e. $y < -3x + 2$
80. What is the domain of the function $f(x) = \frac{4x - 5}{x^2 + 3x - 4}$?
- f. $\{x \mid x \neq 0\}$
 - g. \emptyset
 - h. All real numbers
 - i. $\{x \mid x \neq 3\}$
 - j. $\{x \mid x \neq -4 \text{ and } x \neq 1\}$