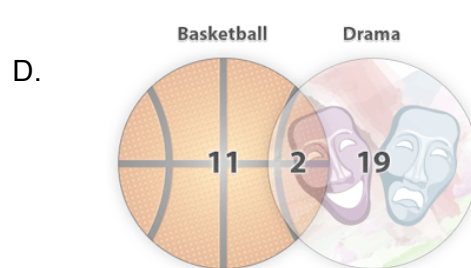
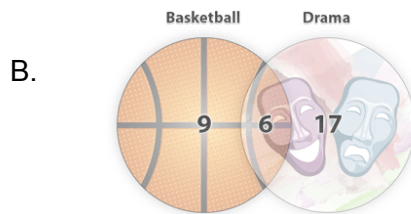
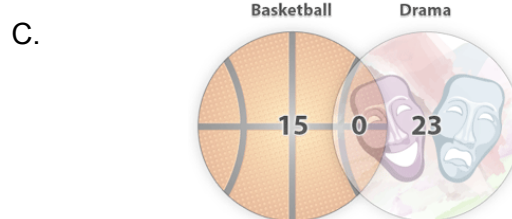
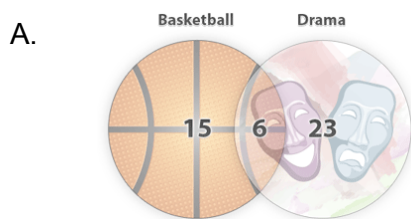


ALGEBRA I END-of-COURSE PRACTICE

33. Let $A = \{0, 1, 2, 3, 4, 5\}$ and $B = \{6, 7, 8, 9\}$

How many distinct pairs are in $A \times B$?

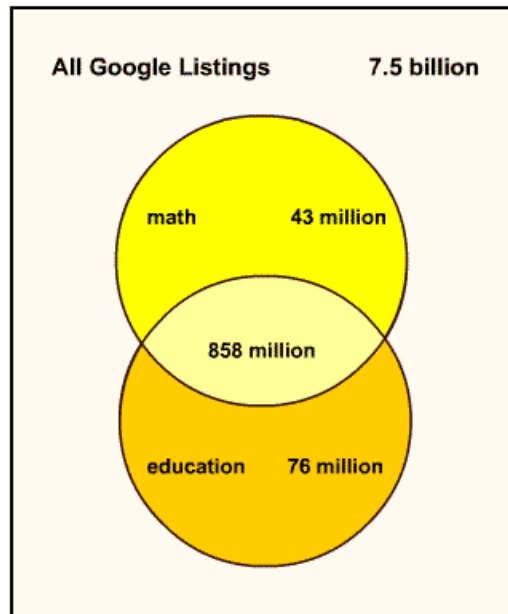
34. There are 32 students in the 10th grade class. There are 15 of those students on the basketball team and 23 of those students in the drama class. Which diagram correctly shows the number of students on the basketball team, in the drama class, and in both of these activities?



35. Given the set $A = \{1, 2, 3\}$ and the set $B = \{-3, -2, -1, 0\}$, what is the total number of elements in $A \times B$?

ALGEBRA I END-of-COURSE PRACTICE

36. The Venn diagram below shows the number of web pages that were found by using the keywords “math” and “education” on Google in spring 2005. How many millions of web sites were found that contain the work “math”?



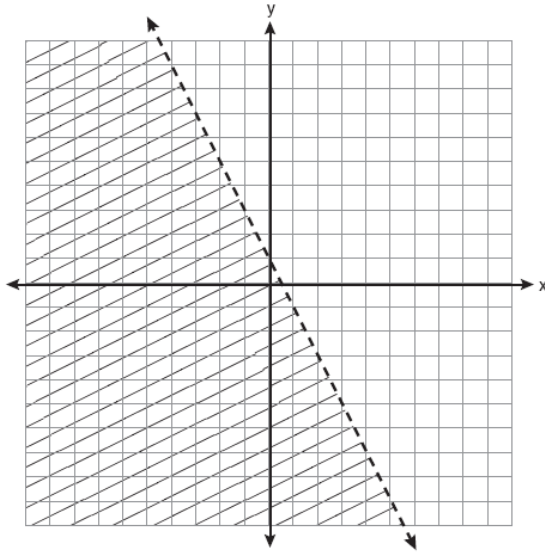
37. Twenty-eight girls went camping. The girls were able to choose to participate in volleyball and swimming. Fourteen girls went swimming, 5 participated in both activities, and 4 girls did neither. How many girls only played volleyball?
38. Let $C = \{1, 4, 5, 7, 9, 10\}$, $A = \{1, 9, 17\}$, and $T = \{9, 10, 13\}$. What is the greatest value in the set $(A \cup T) \cap C$?

**ALGEBRA I END-of-COURSE
PRACTICE**

39. Which expression represents $\frac{(2x^2)(8x^6)}{4x^6}$ in simplest form?
- A. x^2
 - B. x^9
 - C. $4x^2$
 - D. $4x^9$
40. Which property is illustrated by the equation $ax + ay = a(x + y)$?
- A. Associative
 - B. Commutative
 - C. Distributive
 - D. Identity
41. The equations $5x + 2y = 48$ and $3x + 2y = 32$ represent the money collected from school concert ticket sales during two class periods. If x represents the cost for each adult ticket and y represents the cost for each student ticket, what is the cost for each adult ticket?
- A. \$20
 - B. \$10
 - C. \$8
 - D. \$4
42. Given: Set $A = \{(-2, -1), (-1, 0), (1, 8)\}$ and Set $B = \{(-3, -4), (-2, -1), (-1, 2), (1, 8)\}$. What is ?
- A. $\{(1, 8)\}$
 - B. $\{(-2, -1)\}$
 - C. $\{(-2, -1), (1, 8)\}$
 - D. $\{(-3, -4), (-2, -1), (-1, 2), (-1, 0), (1, 8)\}$

**ALGEBRA I END-of-COURSE
PRACTICE**

43. Which inequality is represented by the graph below?



- A. $y < 2x + 1$
- B. $y < -2x + 1$
- C. $y < \frac{1}{2}x + 1$
- D. $y < -\frac{1}{2}x + 1$

44. Is the equation $3(2x - 4) = -18$ equivalent to $6x - 12 = -18$?

- A. Yes, the equations are equivalent by the Associative Property of Multiplication
- B. Yes, the equations are equivalent by the Commutative Property of Multiplication
- C. Yes, the equations are equivalent by the Distributive Property of Multiplication over Addition
- D. No, the equations are not equivalent

**ALGEBRA I END-of-COURSE
PRACTICE**

45. Which expression is equivalent to x^6x^2 ?

A. x^4x^3

B. x^5x^3

C. x^7x^3

D. x^9x^3

46. The Langiappe restaurant has used the following equation to calculate the number of sandwich trays needed for a very large party.

Which equation is equivalent to $4(2 - 5x) = 6 - 3(1 - 3x)$.

A. $8x = 5$

B. $8x = 17$

C. $29x = 5$

D. $29x = 17$

47. The total cost $f(d)$ in dollars of renting a sailboat for d days is given by the function

$$f(d) = 120 + 60d.$$

If the total cost was \$360, for how many days, d , was the sailboat rented?

A. 2

B. 4

C. 6

D. 8

48. The cost to rent a construction crane is \$750 per day plus \$250 per hour of use. What is the maximum number of hours the crane can be used each day if the rental cost is not to exceed \$2500 per day?

**ALGEBRA I END-of-COURSE
PRACTICE**

49. Mike's solution to an equation is shown below.

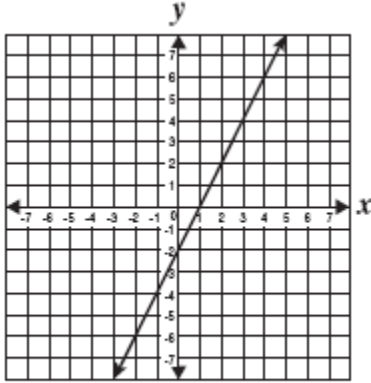
Which statement about Mike's solution is true?

- A. Mike's solution is correct.
- B. Mike made a mistake in Step 1.
- C. Mike made a mistake in Step 3.
- D. Mike made a mistake in Step 5.

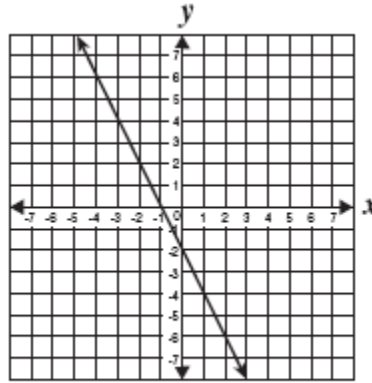
50. What is the y -intercept of the graph of $4x + 2y = 12$?

ALGEBRA I END-of-COURSE
PRACTICE

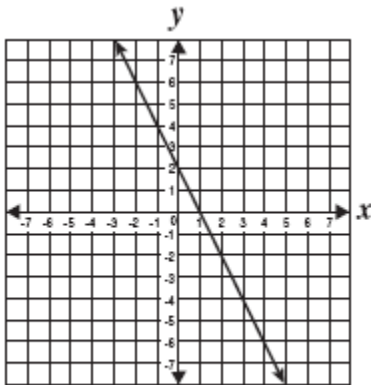
51. Which *best* represents the graph of $y = 2x - 2$?



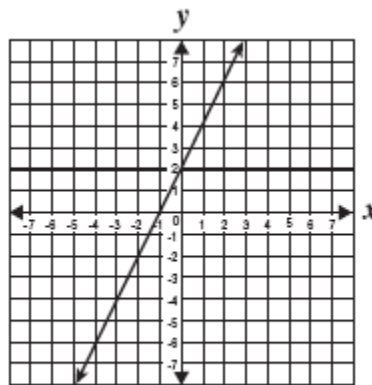
A



C



B



D

52. Harry determined that every time he tapped his wand the sound increased 4 decibels. He noticed that after tapping his wand three times, the sound measured 34 decibels. Which equation best represents the sound when w represents a move of the wand and s represents the loudness of the sound?

- A. $s = 4w - 22$
- B. $s = 4w + 22$
- C. $s = 4w - 43$
- D. $s = 4w = 43$

**ALGEBRA I END-of-COURSE
PRACTICE**

53. The data in the table show the cost of renting a bicycle by the hour, including a deposit.

Renting a Bicycle

Hours (h)	Cost in dollars (c)
2	15
5	30
8	45

If hours, h , were graphed on the horizontal axis, and cost, c , were graphed on the vertical axis, what would be the equation of a line that fits the data?

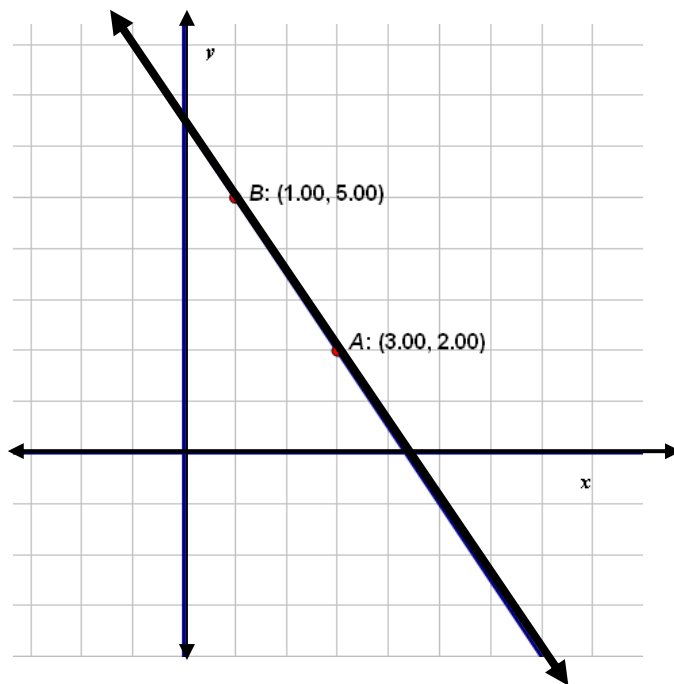
- A. $c = 5h$
- B. $c = \frac{1}{5}h + 5$
- C. $c = 5h + 5$
- D. $c = 5h - 5$
54. $(4x^2 - 2x + 8) - (x^2 + 3x - 2) =$
- A. $3x^2 + x + 6$
- B. $3x^2 + x + 10$
- C. $3x^2 - 5x + 6$
- D. $3x^2 - 5x + 10$
55. The equation of line j is $6x + 5y = 3$, and the equation of line q is $5x - 6y = 0$. Which statement about the two lines is true?
- A. Lines j and q have the same y -intercept.
- B. Lines j and q are parallel.
- C. Lines j and q have the same x -intercept.
- D. Lines j and q are perpendicular.

**ALGEBRA I END-of-COURSE
PRACTICE**

56. The sum of two binomials is $5x^2 - 6x$. If one of the binomials is $3x^2 - 2x$, what is the other binomial?

- A. $2x^2 - 4x$
- B. $2x^2 - 8x$
- C. $8x^2 + 4x$
- D. $8x^2 - 8x$

57. Shirley graphed the line shown on the coordinate plane below.



What is the x -coordinate of the point at which this line intersects the x -axis?

**ALGEBRA I END-of-COURSE
PRACTICE**

58. The distance traveled by a marble on a flat table as it rolls in a straight line is determined by the formula:

$$s = ut + \frac{1}{2}at^2,$$

where

s = Distance traveled

u = Initial Velocity

t = Time elapsed

a = Acceleration

Which of the following shows the distance traveled formula solved for a ?

A. $a = \frac{2s - 2ut}{t^2}$

B. $a = \frac{2s - ut}{t^2}$

C. $a = \frac{2s - 2u}{t}$

D. $a = \frac{s - ut}{t^2}$

59. Which is the line parallel to the line $y = 8x - 2$?

A. $y = 2x - 8$

B. $y = -1/8x + 3$

C. $y = 4 + 8x$

D. $2y = 8x + 3$

60. Find an equation for the line with y -intercept 3 that is perpendicular to the line $3y = 2x - 4$.

A. $2y = 6 - 3x$

B. $2y = 3x + 6$

C. $3y = 9 - 2x$

D. $3y = 2x + 9$