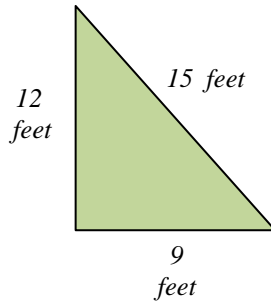


1. The picture at the right shows the garden in Robert's yard. He wants to **cover** the garden with plastic. How many **square feet** of plastic does he need?

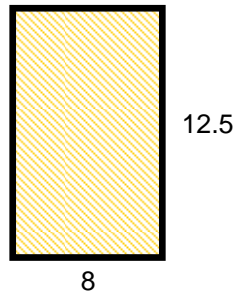


- (1) 21 ft^2
 (2) 54 ft^2
 (3) 56 ft^2
 (4) 106 ft^2
 (5) 180 ft^2
2. Sharon wants to put fencing **around** the rectangular garden in her yard. The garden measures 20 feet by 8 feet. She wants to leave a 4 foot opening for a walkway into the garden. Which of the following expressions gives the number of feet of **fencing** she needs?

- (1) $20 + 8$
 (2) $(2 \times 20) + (2 \times 8)$
 (3) $(2 \times 20) + (2 \times 8) - 4$
 (4) $(20 \times 8) - 4$
 (5) $2(20 - 8)$

3. Which expression represents the **area** of the figure?

- (1) $(2 \times 8) + (2 \times 12.5)$
 (2) 8×12.5
 (3) $2 \times 8 \times 12.5$
 (4) $8 + 12.5$
 (5) $12.5 - 8$



4. Mary wants to make curtains for the three windows in her living room. For each pair of curtains, she needs material measuring 6 feet by 8 feet. **Altogether** how many **square feet** of material does she need?

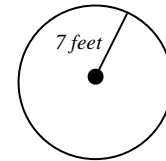
- (1) 48 ft^2
 (2) 51 ft^2
 (3) 96 ft^2
 (4) 108 ft^2
 (5) 144 ft^2

5. Roman wants to **repave** a circular patio. The radius of the patio is 20 feet. How large is the **surface** that he wants to repave?

- (1) 1200 ft^2
 (2) 1256 ft^2
 (3) 1264 ft^2
 (4) 1265 ft^2
 (5) 1276 ft^2

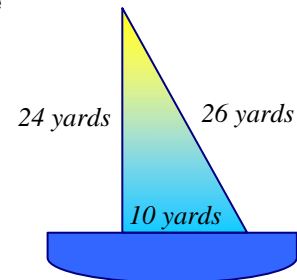
6. Find the **area** of the circle below. Round your answer off to the nearest whole number.

- (1) 49 ft^2
 (2) 154 ft^2
 (3) 164 ft^2
 (4) 174 ft^2
 (5) 184 ft^2

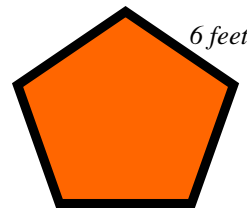


7. What is the distance **around** the sail in the figure?

- (1) 34 yards
 (2) 50 yards
 (3) 51 yards
 (4) 60 yards
 (5) 126 yards



8. All the sides of the 4H arena shown below are equal. The judges want to rope off the arena. How many feet of **rope** will they need?

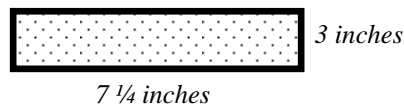


- (1) 12 feet
 (2) 15 feet
 (3) 24 feet
 (4) 30 feet
 (5) 72 feet

9. A wooden flower box measures 36 by 4 by 3 inches. Another box measures 28 by 8 by 6 inches. **How many more cubic inches** of soil can the second box hold than the first?

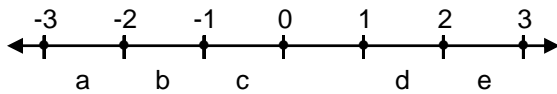
- (1) 432 cubic inches
 (2) 912 cubic inches
 (3) 1,344 cubic inches
 (4) 1,776 cubic inches
 (5) 1,889 cubic inches.

10. Find the **area** of the rectangle.



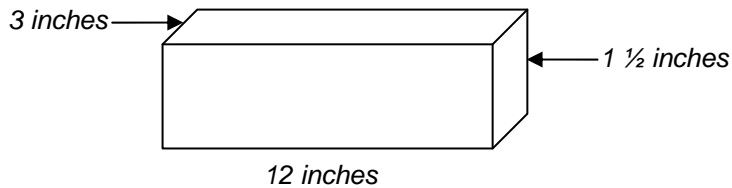
- (1) 2.17 square inches
 (2) 2.175 square inches
 (3) 21.75 square inches
 (4) 217.5 square inches
 (5) Not enough information is given.

11. Which number represents the letter b?



- (1) -2.5
- (2) -2
- (3) -1.5
- (4) 2
- (5) 2.5

12. Find the **volume**.



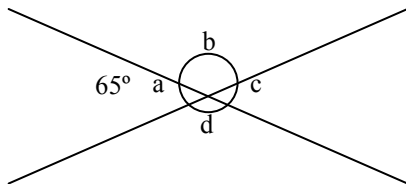
- (1) .54 cubic inches
- (2) 5.4 cubic inches
- (3) 36 cubic inches
- (4) 54 cubic inches
- (5) 540 cubic inches

13. Solve $B^2 + (L + T)$ when B is 3, L is 4, and T is 6.

- (1) 4
- (2) 7
- (3) 10
- (4) 19
- (5) 47

14. $5^3 - 10^2$

15. In the picture below, angle a = 65°. How many degrees are in angle d?

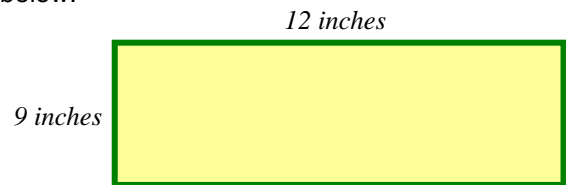


- (1) 15°
- (2) 25°
- (3) 35°
- (4) 105°
- (5) 115°

16. $\sqrt{1024}$

- (1) 22
- (2) 24
- (3) 30
- (4) 32
- (5) 34

17. Find the total number of inches **around** the figure below.

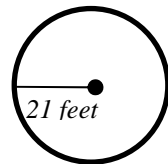


- (1) 12 inches
- (2) 16 inches
- (3) 40 inches
- (4) 42 inches
- (5) 45 inches

18. $3^3 + 7^2$

- (1) 15
- (2) 21
- (3) 23
- (4) 27
- (5) 76

19. What is the **circumference** of the circle?

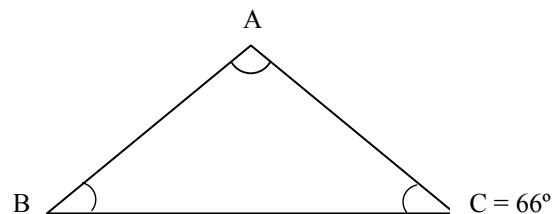


- (1) 65.94 feet
- (2) 130.78 feet
- (3) 131.78 feet
- (4) 131.88 feet
- (5) Not enough information is given.

20. $\sqrt{196}$

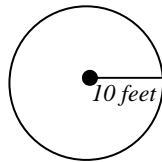
- (1) 10
- (2) 12
- (3) 14
- (4) 16
- (5) 20

21. Find the measurement of angle A in the **isosceles** triangle below.



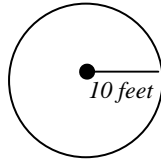
- (1) 48°
- (2) 84°
- (3) 123°
- (4) 180°
- (5) 237°

22. Which expression shows the **circumference** of the circle?



- (1) $3.14 (10)$
- (2) $31.4 (10)$
- (3) $3.14 (20)$
- (4) $31.4 (20)$
- (5) Not enough information is given.

23. Find the **area** of the circle.



- (1) 100 ft^2
- (2) 314 ft^2
- (3) 328 ft^2
- (4) 378 ft^2
- (5) $31,400 \text{ ft}^2$

24. Find the **area** of the triangle shown below.



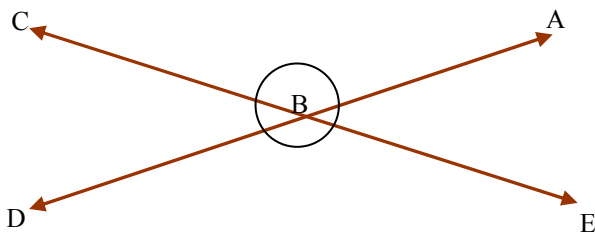
25. The length of a rectangle is 120 yards. The width is 60 yards. Find the **area** of the rectangle.

- (1) 180 square yards
- (2) 360 square yards
- (3) 720 square yards
- (4) 7,200 square yards
- (5) 72,000 square yards

26. Simplify $4^1 \times (\frac{1}{2})^2$

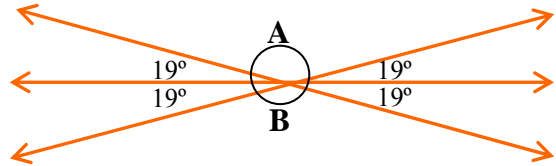
- (1) 0
- (2) 1
- (3) $4 \frac{1}{4}$
- (4) 5
- (5) 17

27. Find the measurements of angle ABC if angle ABE equals 50° .



- (1) 110°
- (2) 120°
- (3) 130°
- (4) 140°
- (5) 150°

28. Find the measurements for angle A and angle B.

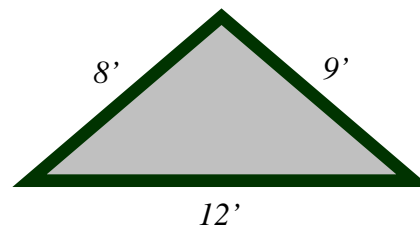


- (1) Both are 104°
- (2) Both are 122°
- (3) Both are 132°
- (4) Both are 142°
- (5) Both are 144°

29. Deborah is framing a 4 inch by 6 inch rectangular photograph with some narrow ribbon. How much **ribbon** does she need?

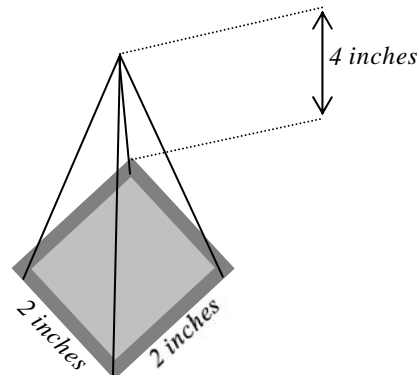
- (1) 12 inches
- (2) 16 inches
- (3) 20 inches
- (4) 24 inches
- (5) 36 inches

30. Find the **perimeter** of the triangle below.



- (1) 17 feet
- (2) 20 feet
- (3) 21 feet
- (4) 29 feet
- (5) Not enough information is given.

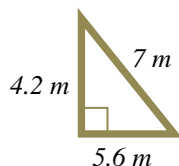
31. Find the **volume** of the square pyramid below. Round your answer off to the nearest whole number.



- (1) 3
- (2) 4
- (3) 5
- (4) 6
- (5) 7

32. What is the perimeter of the triangle below?

- (1) 9.8 m
- (2) 12.6 m
- (3) 15.4 m
- (4) 16.8 m
- (5) 19.6 M



33. The vertex angle of an isosceles triangle measures 55° . Which of the following represents the measurement of each base angle?

- (1) $90^\circ - 55^\circ$
- (2) $180^\circ - 55^\circ$
- (3) $2(180^\circ - 55^\circ)$
- (4) $\frac{(180^\circ - 55^\circ)}{2}$
- (5) $180^\circ - \frac{55^\circ}{2}$

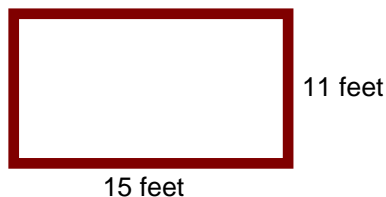
34. The answer to $\sqrt{1804}$ is between which of the following pairs of numbers?

- (1) 20 and 30
- (2) 30 and 40
- (3) 40 and 50
- (4) 50 and 60
- (5) 60 and 70

35. The answer to $\sqrt{5184}$ is between which of the following pairs of numbers?

- (1) 40 and 50
- (2) 50 and 60
- (3) 60 and 70
- (4) 70 and 80
- (5) 80 and 90

36. Find the perimeter of the figure below.



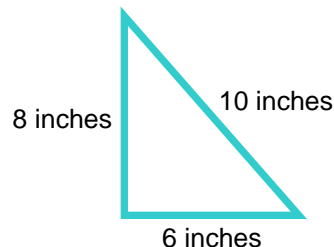
- (1) 2 feet
- (2) 30 feet
- (3) 52 feet
- (4) 165 feet
- (5) 180 feet

37. Find the area of the square tile below.



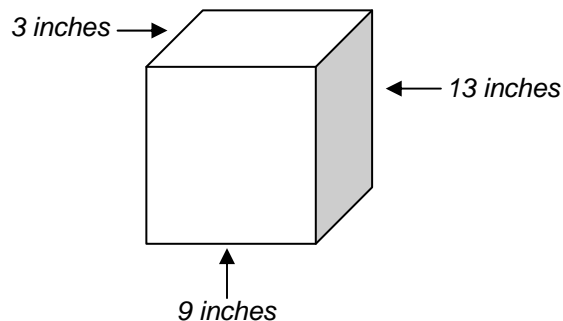
- (1) 1 square inches
- (2) 8 square inches
- (3) 16 square inch
- (4) 160 square inches
- (5) 165 square inches

38. What is the area of the triangle below?



- (1) 480 square inches
- (2) 240 square inches
- (3) 52 square inches
- (4) 48 square inches
- (5) 24 square inches

39. Find the volume of the box below?



- (1) 25^3 inches
- (2) 27^3 inches
- (3) 117^3 inches
- (4) 351^3 inches
- (5) 376^3 inches

40. Solve the following expression.

$$19(4) + 19(84)$$

- (1) 76
- (2) 672
- (3) 1596
- (4) 1672
- (5) 1872

Items 41 and 42 are based on the chart.

Daily Student Activity				
Monday	Tuesday	Wednesday	Thursday	Friday
90	81	116	78	125

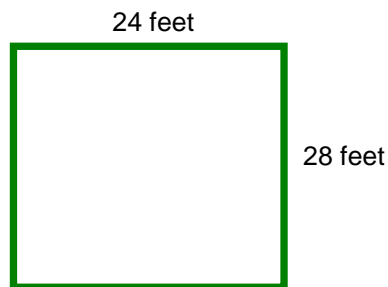
41. What is the daily **average or mean** number of students for the five day period?
- (1) 490
 - (2) 98
 - (3) 90
 - (4) 49
 - (5) 47
42. What is the **median** number of students for the five day period?
- (1) 490
 - (2) 98
 - (3) 90
 - (4) 49
 - (5) 47

Items 43 and 44 are based on the following table.

Cities Around the World		
	High Temperature	Low Temperature
Bermuda	73	66
Cairo	75	57
Copenhagen	46	43
Geneva	48	32
Helsinki	43	39
Istanbul	59	48

43. Which city had the lowest **HIGH** temperature?
- (1) Helsinki
 - (2) Copenhagen
 - (3) Bermuda
 - (4) Geneva
 - (5) Istanbul
44. What is the **difference** in degrees between the high and the low temperatures recorded in Cairo?
- (1) 18
 - (2) 57
 - (3) 75
 - (4) 92
 - (5) 102

45. The assets of the First National Bank total \$3,832,521,652. What are the bank's assets **rounded to the nearest million**?
- (1) \$3,800,000,000
 - (2) \$3,832,512,000
 - (3) \$3,832,500,000
 - (4) \$3,833,000,000
 - (5) \$4,000,000,000
46. On their vacation the Hawkins drove at an average speed of 53 miles per hour. They drove for 17 hours. How many miles did they drive?
- (1) 70
 - (2) 751
 - (3) 862
 - (4) 901
 - (5) 1203
47. Find the square root of 8464.
- (1) 92
 - (2) 136
 - (3) 152
 - (4) 241
 - (5) 431
48. Find the value of $\sqrt{5929}$.
- (1) 32
 - (2) 49
 - (3) 77
 - (4) 84
 - (5) 96
49. How many square feet of carpeting are needed to **cover** the area shown below?



- (1) 104^2 feet
- (2) 112^2 feet
- (3) 324^2 feet
- (4) 576^2 feet
- (5) 672^2 feet

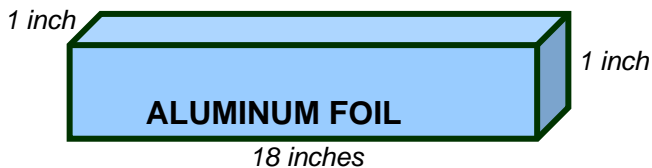
50. Which of the following expressions equals $27(8 - 1)$?

- (1) $27(8) - 27(1)$
- (2) $27(8) + 27(1)$
- (3) $27(1) + 27(8)$
- (4) $27(1) - 27(8)$
- (5) $8(27) + 1(27)$

51. Hanna Burns bought 5 pairs of pants at \$24 each and 5 shirts at \$15 each. Which of the following expressions shows the **total** cost of her purchases?

- (1) $5(24) + 15$
- (2) $(15) - 5(24)$
- (3) $5(24 - 15)$
- (4) $5(24 + 15)$
- (5) $5(24) - 5(15)$

52. What is the **volume** in cubic inches of the aluminum foil box pictured below?



- (1) 18 cubic inches
- (2) 20 cubic inches
- (3) 40 cubic inches
- (4) 36 cubic inches
- (5) 72 cubic inches

53. Bertha Trujillo's grandchildren are ages 4, 12, 19, 2, 6, 4, 17, and 8. What is the **average** age of her grandchildren?

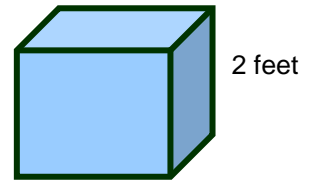
- (1) 8
- (2) 9
- (3) 11
- (4) 12
- (5) 15

54. Two angles of a triangle measure 45° and 44° . Which expression below could be used to find the measurement in degrees of the third angle?

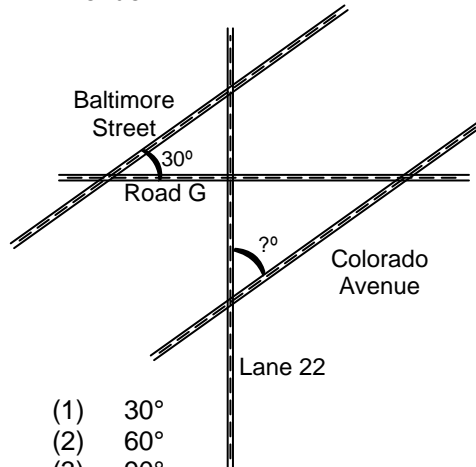
- (1) $180 - (44 + 45)$
- (2) $(45 + 44) + 180$
- (3) $(45 + 44) / 180$
- (4) $(45 + 44) - 180$
- (5) $360 - (44 + 45)$

55. Which expression shows the **volume** of this storage cube?

- (1) $2(3)$
- (2) $(2)(2)$
- (3) $(2)(2)(2)$
- (4) $2 + 2 + 2$
- (5) $(2)(2)(2)(2)$



56. Baltimore Street intersects Road G at a 30° angle. Colorado Avenue is parallel to Baltimore Street. Lane 22 is perpendicular to Road G. At what angle does Lane 22 intersect Colorado Avenue?



- (1) 30°
- (2) 60°
- (3) 90°
- (4) 145°
- (5) 150°