

1. Bob Dylan compact discs are on sale at Super Sounds for \$6.95 each. Find the cost of five cds? Round your answer off to the nearest dollar.

① \$25
 ② \$35
 ③ \$40
 ④ \$45
 ⑤ \$49

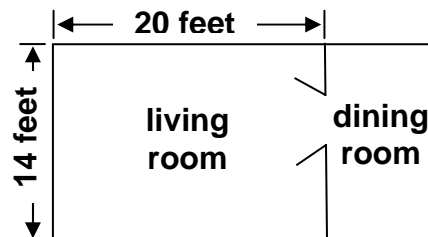
2. Francisco is a brick mason. Let x stand for the hourly wage he pays his apprentice. Francisco makes \$5 more than three times the wage of his apprentice. Which of the following expresses Francisco's hourly wage?

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

3. How many boards, each $1\frac{1}{2}$ feet long, can be cut from a board that is 12 feet long?

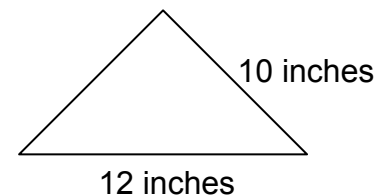
① 6
 ② 8
 ③ 9
 ④ 15
 ⑤ 18

4. The figure below shows the plan of the living room and the dining room of a house. What is the area in square feet of the floors of both rooms?



- ① 68 square feet
 ② 140 square feet
 ③ 280 square feet
 ④ 420 square feet
 ⑤ not enough information given

5. What is the perimeter of the isosceles triangle?



	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

6. Each of the four members of the Rodriguez family bought a ticket for a music festival. A total of 360 tickets were sold. If one ticket holder will win the grand prize, what is the **probability** that the winner will be someone in the Rodriguez family?

- ① $\frac{1}{200}$
- ② $\frac{1}{100}$
- ③ $\frac{1}{90}$
- ④ $\frac{1}{36}$
- ⑤ $\frac{1}{4}$

7. When Abraham was 20 years old, he weighed 150 pounds. When he was 40, he weighed 180 pounds. By **what percent** did his weight **increase** in those years?

- ① 2%
- ② 20%
- ③ 30%
- ④ $33\frac{1}{3}\%$
- ⑤ 40%

8. If $3m + 6 = 30$, what is the value of m ?

- ① 4
- ② 6
- ③ 8
- ④ 10
- ⑤ 12

9. In a recent year, 327,450 Americans were employed as fire fighters. Round this number to the nearest 10,000.

- ① 320,000
- ② 325,000
- ③ 327,000
- ④ 328,000
- ⑤ 330,000

Use the following information to answer questions 10 and 11.

A man's shirt is listed in a catalog for \$30. Below is a list of prices for the same shirt at several stores.

Clyde's Clothes	\$24
Sam's Supply	\$32
Maria's Fashion	\$33
Dave's Duds	\$27
Alma's Apparel	\$35

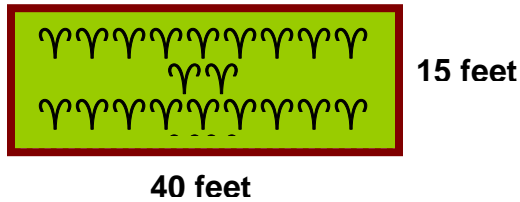
10. For which store is the price of the shirt 10% less than the catalog price?

- ① Clyde's Clothes
- ② Sam's Supply
- ③ Maria's Fashion
- ④ Dave's Duds
- ⑤ Alma's Apparel

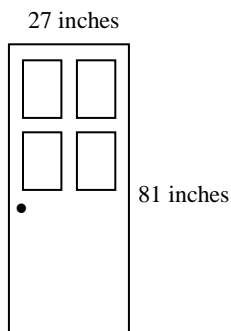
11. For a Labor Day sale, Maria's Fashion has all clothes marked $\frac{1}{3}$ off the regular price. **Approximately**, what is the **sale price** of the shirt?

- ① \$11
- ② \$22
- ③ \$27
- ④ \$30
- ⑤ \$32

12. Below is a rectangular vegetable garden. Which of the following represents the number of feet of fencing required to **enclose** the garden?

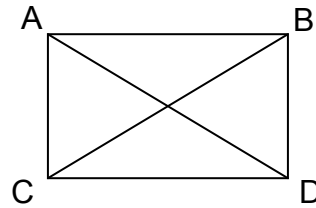


- ① 40×15
 ② $40 + 15$
 ③ $2(40) + 15$
 ④ $(40 + 15)^2$
 ⑤ $2(40) + 2(15)$
13. What is the value of $20^2 + 2^3$?
- ① 46
 ② 48
 ③ 408
 ④ 484
 ⑤ $2(40) + 2(15)$
14. What is the **ratio** of the width to the height of the door below?

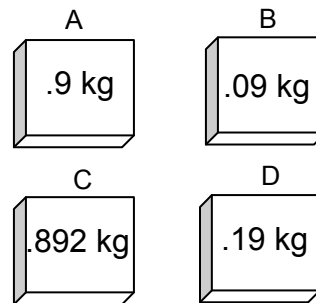


- ① 2:3
 ② 1:2
 ③ 1:3
 ④ 2:7
 ⑤ 1:8

15. For the rectangle pictured below, which side is **parallel** to AB ?



- ① AC
 ② AD
 ③ BC
 ④ BD
 ⑤ CD
16. Arrange the packages pictured below in order from **lightest to heaviest**.

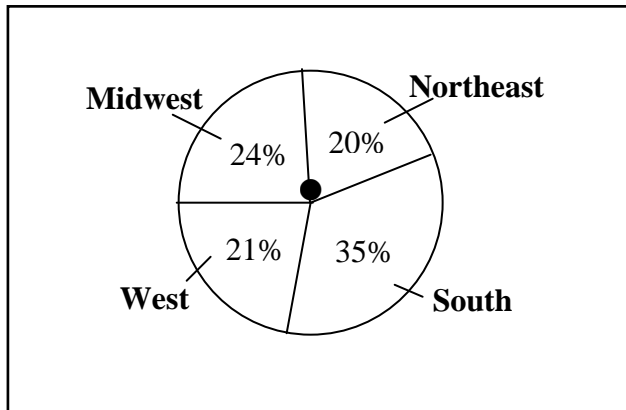


- ① A, D, C, B
 ② D, B, C, A
 ③ B, D, C, A
 ④ A, B, D, C
 ⑤ B, A, C, D

The graph below shows the percent of the U.S. population living in each of the four major areas in the continental United States.

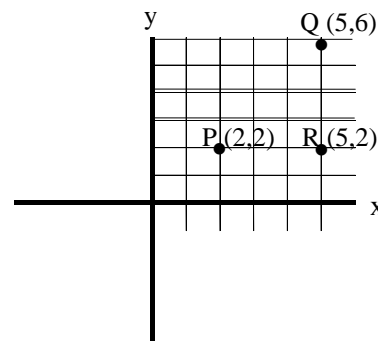
Use the graph to answer questions 17 and 18.

DISTRIBUTION OF U. S. POPULATION



17. What fraction of the population lives in the South?
- ① $\frac{1}{5}$
 - ② $\frac{1}{4}$
 - ③ $\frac{1}{3}$
 - ④ $\frac{7}{20}$
 - ⑤ $\frac{13}{20}$
18. The population of the United States is about 250,000,000. Approximately how many people live in the Northeast?
- ① 15,000,000
 - ② 20,000,000
 - ③ 25,000,000
 - ④ 35,000,000
 - ⑤ 50,000,000

Use the figure below to answer questions 19 and 20.



19. What is the distance between P and R?
- ① 1
 - ② 2
 - ③ 3
 - ④ 4
 - ⑤ 5
20. What is the distance between P and Q?
- ① 2
 - ② 3
 - ③ 4
 - ④ 5
 - ⑤ 6
21. If $4n - 9 = 31$, then
- ① $n = 4$
 - ② $n = 5$
 - ③ $n = 8$
 - ④ $n = 10$
 - ⑤ $n = 12$

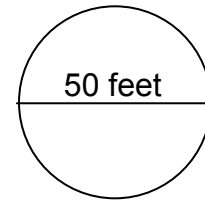
Use the following information to answer questions 22, 23, and 24.

The Martins bought a house that cost \$80,000. They made a down payment of \$12,000. They will have to pay \$420 a month in mortgage payments and \$700 a year in real estate taxes.

22. The down payment is what percent of the total cost of the house?
- ① 9%
 - ② 10%
 - ③ 12%
 - ④ 15%
 - ⑤ 20%
23. Which expression represents the Martins' mortgage payments and real estate taxes for one year?
- ① $\frac{\$42}{0}$
 - ② $\frac{\$70}{0}$
 - ③ $12 (\$420)$
 - ④ $12 (\$700)$
 - ⑤ $12 (\$420) + \700
24. The difference between the total cost of the house and the down payment is the mortgage. Find the amount of their mortgage?
- ① \$63,000
 - ② \$68,000
 - ③ \$73,000
 - ④ \$85,000
 - ⑤ \$92,000

25. The figure below shows the construction plan for a pool. What is the distance around the pool?

- ① 1.57
- ② 15.7
- ③ 157
- ④ 314
- ⑤ 1963

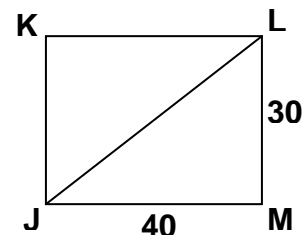


26. A team can assemble 15 machine parts in two hours. How many machine parts can it assemble in 40 hours?

- ① 180
- ② 200
- ③ 240
- ④ 300
- ⑤ 360

27. What is the diagonal distance (JL) for the rectangle pictured below?

- ① 30
- ② 40
- ③ 50
- ④ 60
- ⑤ 70



28. Find the distance around a monument whose base is a square measuring 4.5 meters on each side.

- ① $4 (4.5)$
- ② $\frac{2.5}{2}$
- ③ $2 (4.5)$
- ④ $(4.5) 2$
- ⑤ $4.5 + 4.5$

29. The Greek letter π (pi) is defined as the ratio of the circumference (C) divided by the diameter (d) of a circle. Based on this information, which of the following represents π ?

① ② ③ ④ ⑤

① $\frac{C}{d}$

② $\frac{(C + d)}{2}$

③ $\frac{d}{C}$

④ $\frac{Cd}{2}$

⑤ $\frac{(C - d)}{2}$

30. Which of the following represents the **volume** in cubic inches of the rectangular box pictured below?

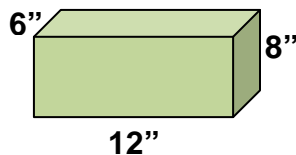
① 12×8

② $12 + 8$

③ $12(8)(6)$

④ $2(12 + 8)$

⑤ $6(8 + 12)$



31. If $12a - 5 = 4a + 11$, then $a =$

① 2

② 3

③ 5

④ 8

⑤ 12

32. The choices below list the price of an 8 ounce package of fish sticks at five different stores. Which is the **least** expensive?

① 2 for \$3

② \$1.29 each

③ 10 for \$9

④ \$4.49 for 4

⑤ \$3.99 for 3

33. The expression $3a - 12$ is the **same** as which of the following?

① $3(a - 4)$

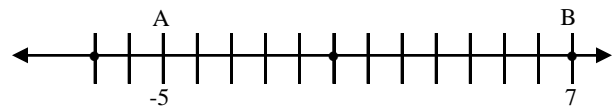
② $3(a - 12)$

③ $12(a - 3)$

④ $3(4a)$

⑤ $3a(12)$

Use the number line below to answer question 34.



34. How many units apart are points A and B?

① 2

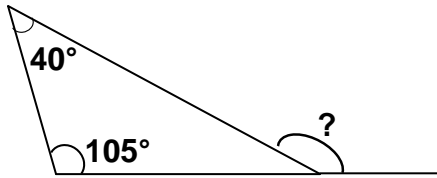
② 5

③ 7

④ 12

⑤ 35

35. Find the number of degrees in the unmeasured angle of the triangle pictured below.



	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
①	①	①	①	①
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

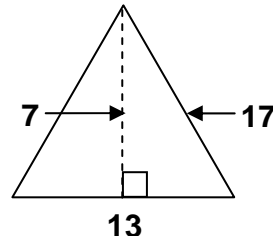
36. If $y = 2x - 5$, what is the value of y when $x = 3$?

- ① -1
- ② 0
- ③ 1
- ④ 3
- ⑤ 7

37. Which of the following equals $(1.5)^2$?

- ① .225
- ② 2.25
- ③ 22.5
- ④ 225
- ⑤ 30

38. Which of the following represents the area of the figure below?

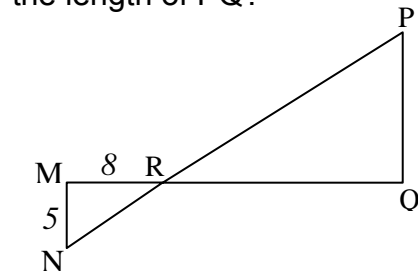


- ① $2 \times 13 \times 7$
- ② 13×7
- ③ $2(13) + 2(7)$
- ④ $\frac{1}{2}(13 + 7)$
- ⑤ $\frac{1}{2} \times 13 \times 7$

39. George drove for three hours at an average speed of 55 mph and then for another two hours at 65 mph. Which of the following represents the total distance that he drove?

- ① 5×55
- ② 5×110
- ③ $55 \times 3 + 2$
- ④ $(55 \times 3) + (65 \times 2)$
- ⑤ $\frac{55 + 65}{5}$

40. For the figure below, $QR = 120$. What is the length of PQ ?



	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
①	①	①	①	①
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

41. If $x - 6 > 24$, then

- ① $x = 4$
- ② $x = 6$
- ③ $x = 24$
- ④ $x = 28$
- ⑤ $x = 32$

42. At the rate of \$9 an hour, how much does Shirley make in $1\frac{1}{2}$ hours?

- ① \$4.50
- ② \$11.50
- ③ \$13.50
- ④ \$18
- ⑤ not enough information given

43. 1 inch = 60 miles on a map. Española and Santa Fe are 80 miles apart. Find the distance in inches between Española and Santa Fe on the map.

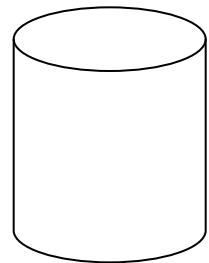
- ① $1\frac{1}{3}$
- ② $1\frac{3}{4}$
- ③ 2
- ④ $2\frac{1}{3}$
- ⑤ $2\frac{2}{3}$

44. Sam bought 2 brushes for \$8 each and 3 gallons of paint for \$15 each. Which of the following represents the **total** cost of the purchases?

- ① $2(8) + 3(15)$
- ② $2(15) + 3(8)$
- ③ $5(23)$
- ④ $(2 + 3) \times (8 + 15)$
- ⑤ $\frac{(2 + 8 + 15)}{3}$

45. The diameter of the cylinder pictured below is 10 feet. What is the **volume** of the cylinder?

- ① 10 cubic feet
- ② 100 cubic feet
- ③ 314 cubic feet
- ④ 3140 cubic feet
- ⑤ not enough information given



46. If 7 more than 6 times a number is 19, what is the number?

- ① 1
- ② 2
- ③ 3
- ④ 6
- ⑤ 9

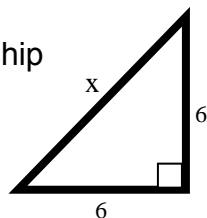
47. Which of the following expresses 3 less than a number squared?

- ① $2x - 3$
- ② $x^2 - 3$
- ③ $x^3 - 2$
- ④ $3x - 2$
- ⑤ $2(x - 3)$

48. Simplify the expression $7s - 4s$.

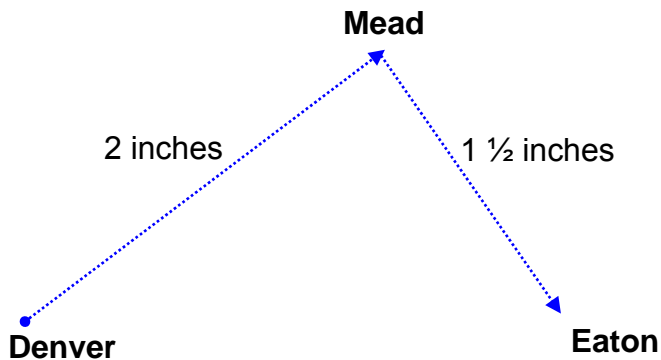
- ① $28s$
- ② $11s$
- ③ $11s^2$
- ④ $3s$
- ⑤ $4s$

49. Which of the following expresses the relationship among the sides of the figure?



- ① $x = 6 + 6$
- ② $x = 2(6)$
- ③ $x = 2(6) + 2(6)$
- ④ $x = \frac{(6 + 6)}{2}$
- ⑤ $x^2 = 6^2 + 6^2$

Use the illustration below to answer question 50.



Scale: 1 inch = 12 miles

50. How many miles is it from Denver to Eaton by way of Mead?

	⊗	⊗	⊗	
⊙	⊙	⊙	⊙	⊙
①	①	①	①	①
②	②	②	②	②
③	③	③	③	③
④	④	④	④	④
⑤	⑤	⑤	⑤	⑤
⑥	⑥	⑥	⑥	⑥
⑦	⑦	⑦	⑦	⑦
⑧	⑧	⑧	⑧	⑧
⑨	⑨	⑨	⑨	⑨

51. Maxine is 20 years older than her daughter Julia. Let m stand for Maxine's age and d for her daughter's age. Which equation expresses the sum of Maxine's and her daughter's ages if the sum of their ages equals 58?

- ① $d + (m + 20) = 58$
 ② $d + m - 20 = 58$
 ③ $2(m) - 20 = 58$
 ④ $20(d) = 58$
 ⑤ $\frac{m}{20} = 58$

52. In a recent year, the U.S. government received \$98,000,000,000 in corporate income tax. Which of the following expressed that number in scientific notation?

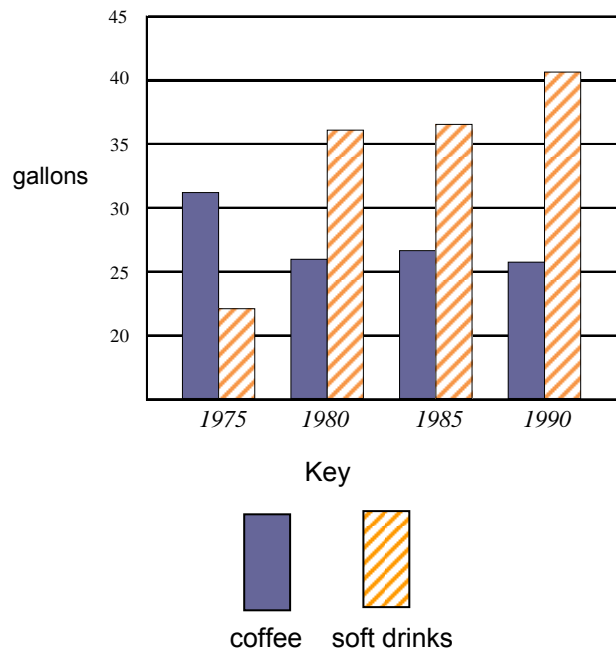
- ① 98×10^6
 ② 9.8×10^6
 ③ 9.8×10^8
 ④ 9.8×10^{10}
 ⑤ 9.8×10^{12}

53. At a cost of \$.90 per linear foot, what is the price of a board that is 78 inches long?

- ① \$5.02
 ② \$5.58
 ③ \$5.85
 ④ \$7.02
 ⑤ \$7.20

Use the graph below to answer questions 54 and 55.

**PER CAPITA CONSUMPTION
OF COFFEE AND SOFT DRINKS
(IN GALLONS)**



54. Approximately, how many gallons of coffee were consumed per capita in 1975?

- ① 20
 ② 25
 ③ 30
 ④ 35
 ⑤ 44

55. By approximately how many gallons did the yearly consumption of soft drinks increase from 1975 to 1990?

- ① 5
 ② 10
 ③ 15
 ④ 20
 ⑤ 25