

Answer questions 1-35 on your Scantron.

Questions 1-30 will be scored for the Power Bowl event. In the event of a tie, questions 31-35 will be used as the tiebreaker.

1. Subtract. $-15 - (-8)$

- a. 23 b. 7 c. -23 d. -7 e. Not Given**

2. Multiply. $2\frac{3}{4} \times 2\frac{9}{5}$

- a. 7 b. $6\frac{4}{5}$ c. $23\frac{2}{9}$ d. $10\frac{9}{20}$ e. Not Given**

3. What is 2,799,489 rounded to the nearest thousand?

- a. 2,799,000 b. 2,800,000 c. 2,799,500 d. 3,000,000 e. Not Given**

4. Subtract. $23\frac{2}{3} - 15\frac{6}{17} =$

- a. $8\frac{16}{51}$ b. 9 c. $8\frac{2}{5}$ d. $7\frac{16}{51}$ e. Not Given**

5. The labor charge of repairing a car is \$42.50 per hour. If it takes 2.5 hours to repair the car, what will be the charge for labor?
- a. \$812.50 b. \$13.00 c. \$106.25 d. \$84.50 e. Not Given
6. .28 is 20% of what number?
- a. 140 b. 5.6 c. 560 d. 28 e. Not Given
7. Continue the following pattern. 2, 7, 4, 9, 6, 11, . . . What is the next number?
- a. 13 b. 5 c. 9 d. 8 e. Not Given
8. What is the mean (average) of the following numbers? 63, 45, 58, 55, 60, 49
- a. 54 b. 56 c. 60 d. 49 e. Not Given
9. Mr. Smith has 4 black ties, 3 gray ties, 2 blue ties, and 1 brown tie in his closet. If he selects one tie without looking, what is the probability that it will be blue?
- a. $\frac{1}{4}$ b. $\frac{2}{8}$ c. $\frac{1}{5}$ d. $\frac{1}{2}$ e. Not Given

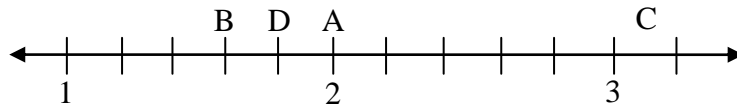
10. Charlie lives on a chicken farm. Every morning he collects the eggs from the hen house. She collected 162 eggs on Monday, 104 eggs on Tuesday, and 157 eggs on Wednesday. She packed them into cartons, each containing 12 eggs. How many egg cartons can she fill completely?

- a. 36 b. 35.3 c. 35 d. 423 e. Not Given

11. Solve. $8 \times [6 - (-24)] + 71 =$

- a. -35 b. 215 c. 311 d. 73 e. Not Given

12. Choose the letter on the number line which represents $1\frac{3}{5} + 0.2$.



- a. A b. B c. C d. D e. Not Given

13. What number is evenly divisible by 9?

- a. 3,735 b. 769 c. 192 d. 991 e. Not Given

14. Five hundred sixty people entered the marathon race and 75% finished. How many people didn't finish the marathon?

- a. 420 people b. 75 people c. 140 people d. 410 people e. Not Given

15. In which quadrant is the point $(-2,-3)$ located in the coordinate plane?

- a. I b. II c. III d. IV e. Not Given

16. The circumference of the circle outlining the boundary of where a discus thrower competes is 17.27 feet. What is the diameter of the circle?

$$(C = 2\pi r, \pi = 3.14)$$

- a. 5.5 feet b. 2.75 feet c. 15 feet d. 8.5 feet e. Not Given

17. What is the y -intercept of the line $5x + 3y = 1$

- a. $\frac{1}{3}$ b. 3 c. $\frac{1}{5}$ d. 5 e. Not Given

18. If you begin with a one digit integer, multiply by 3, add 8, divide by 2, and subtract 6, you will get the integer back. What is the original number?

- a. 19 b. 6 c. 25 d. 4 e. Not Given

19. Solve for x : $3x + 7 + 2(8 + 4x) = 5(2x + 9) - x$

- a. -11 b. 9 c. 10 d. 11 e. -9

20. A popular television game show holds a tournament each year. Three people participate in each game of the competition and only the winner proceeds to the next round. Where the winner is joined by two new players. How many players participate if there are five rounds?
- a. 15 people b. 12 people c. 11 people d. 18 people e. Not Given
21. Inserting only one decimal point, where should it be placed to make the equation true? $493 \times 17 = 8.381$
- a. 4.93 b. 0.493 c. 1.7 d. 49.3 e. Not Given
22. A right triangle has a base of 8 and a hypotenuse of 10. What is its area?
- a. $40 u^2$ b. $24 u^2$ c. $48 u^2$ d. $12 u^2$ e. Not Given
23. A sale at a department store says that customers will receive 40% off their total purchase. Lucy buys three items: a coat regularly priced at \$40, a pair of shoes at \$25, and a purse at \$15. What will her final bill be? (There is no sales tax.)
- a. \$32 b. \$112 c. \$48 d. \$54 e. Not Given

24. Five mice – Mindy, Marty, Muriel, Mabel, and Mike – were nibbling the cheese on the kitchen table, but Whiskers the cat chased them back into their hole. Muriel Mouse made it back third, Mike Mouse was fourth, Mabel Mouse was after Mike, and Marty Mouse was not second. Which mouse was first?

- a. Marty b. Mabel c. Muriel d. Mindy e. Not Given

25. Find the value of x if all of the following number sentences are true.

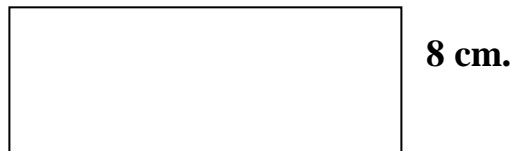
$$\frac{3}{4}(28) \div x = 3 \quad (8x - 6) \div 2 = 25 \quad 12x - 8 = 76$$

- a. 5 b. 18 c. 7 d. 3 e. Not Given

26. After the Summer Solstice parade there were many T-shirts left over. The store made the T-shirts \$5 less. There were still many shirts left. The store owner then sold them for half of the lower price. The new price was \$8. What was the original price of the T-shirts?

- a. \$13 b. \$21 c. \$16 d. \$40 e. Not Given

27. If the area of the rectangle is 112 cm^2 what is the perimeter?



- a. 104 cm. b. 14 cm. c. 12 cm. d. 44 cm e. Not Given

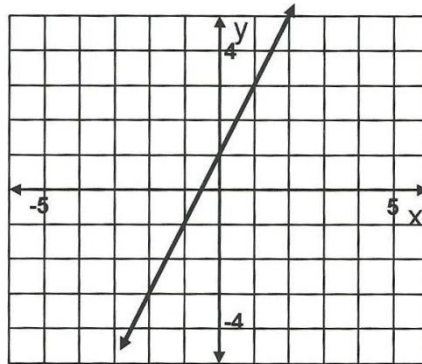
28. The number of students in Sarah's aerobics class increased from 15 to 24. What was the percent of the increase?

- a. 60% b. 37.5% c. 62.5% d. 135% e. Not Given

29. Find the value of this expression: $\frac{2^3 \cdot 3^2 + 2^2(1+2 \cdot 3)}{3^2 + 4^2}$

- a. 5 b. 4 c. $\frac{20}{7}$ d. $\frac{18}{7}$ e. 6

30. What is the equation of the line shown in the graph?

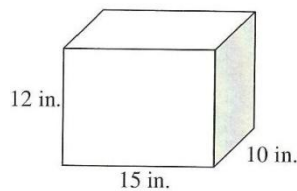


- a. $y = -2x + 1$ b. $y = -2x - 1$ c. $y = \frac{1}{2} + 1$ d. $y = 2x + 1$ e. Not Given

31. The measure of one angle of a parallelogram is 115° . How many degrees are in the measure of an adjacent angle of the parallelogram?

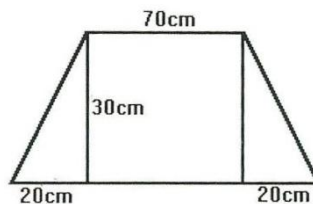
- a. 65° b. 85° c. 115° d. 180° e. Not Given

32. Find the surface area of the box.



- a. 37 in^2 b. 960 in^2 c. 1080 in^2 d. 900 in^2 e. Not Given

33. A carpenter was making some interesting coffee tables (in the shape of a trapezoid). He wanted to get enough wood to make 15 tables. If the dimensions of the tables were the same as in the figure below, how much wood would he need?

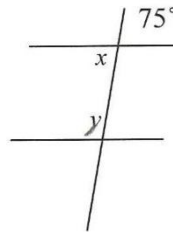


- a. $14,000 \text{ cm}^2$ b. $49,500 \text{ cm}^2$ c. $30,000 \text{ cm}^2$ d. $40,500 \text{ cm}^2$ e. Not Given

34. An ice sculpture is melting at the rate of half its weight every hour. After 8 hours, it weighs $\frac{5}{16}$ of a pound. How much did it weigh in the beginning?

- a. 20 pounds b. 40 pounds c. 16 pounds d. 80 pounds e. Not Given

35. In the diagram below, two parallel lines are intersected by a third line, forming a 75° angle as shown. If x and y represent the degree measures of the angles indicated, then $x+y=$



- a. 75° b. 90° c. 105° d. 180° e. Not Given