

1 . Express 0.00125 as a numeral in Scientific Notation.

- A.  $0.125 \times 10^{-2}$     B.  $0.125 \times 10^2$     C.  $1.25 \times 10^{-3}$     D.  $1.25 \times 10^3$

2. Convert  $0.\overline{38}$  to a fraction in simplest form.

- A.  $\frac{38}{100}$     B.  $\frac{38}{99}$     C.  $\frac{7}{18}$     D.  $\frac{19}{50}$

3. If  $^{-}3g = ^{-}27$  then  $g =$

- A.  $\frac{1}{9}$     B. 9    C.  $\frac{^{-}1}{9}$     D.  $^{-}9$

4 If  $w - ^{-}9 = 21$  then  $w =$

- A. 30    B.  $^{-}12$     C. 12    D.  $^{-}30$

5. If  $5n + 3 = 38$  then  $n =$

- A.  $8\frac{1}{5}$     B. 7    C.  $8\frac{3}{5}$     D. 11

6. If  $\frac{s}{7} + 2 = 5$  then  $s =$

- A.  $\frac{3}{7}$     B. 49    C. 37    D. 21

7. If  $4h > 24$  then the solution set for  $h$  is

- A.  $h > 6$       B.  $h < 6$       C.  $h > 144$       D.  $h < 144$

8. If  $r + 5 < 13$  then the solution set for  $r$  is

- A.  $r < 8$       B.  $r < -8$       C.  $r < 18$       D.  $r > 18$

9. If  $11 - 2n < 23$  then

- A.  $n > 17$       B.  $n < -17$       C.  $n < -6$       D.  $n > -6$

10. If  $5p - 4 > 15$  then

- A.  $p < 3.8$       B.  $p > 2.2$       C.  $p > 3.8$       D.  $p < 2.2$

11. Simplify:  $9x - 2y + 15x + 5y$

- A.  $27xy$   
B.  $24x + 3y$   
C.  $-24x - 7y$   
D.  $24x - 3y$

12. Simplify:  $-5(4a - 2b) - (8a + 3b)$

- A.  $-28a + 13b$   
B.  $-28a - 7b$   
C.  $-28a + 7b$   
D.  $-17a + 4b$

13. Translate into a variable expression: Nine less than twice a number

- A.  $9 - 2n$
- B.  $9 + 2n$
- C.  $2n - 9$
- D.  $n - 9$

14. Simplify :  $5^{-2}$

- A.  $\frac{1}{25}$
- B.  $^{-}25$
- C.  $\frac{5}{2}$
- D.  $\frac{^{-}1}{25}$

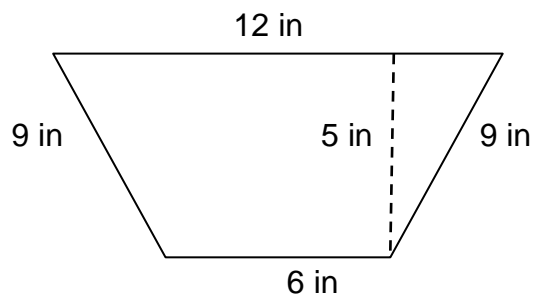
15. Simplify :  $^{-}8^2$

- A.  $\frac{1}{64}$
- B.  $^{-}64$
- C. 64
- D.  $\frac{^{-}1}{64}$

16. To the nearest hundredth, what is the area of a circle with a diameter of 6 cm?  
(use 3.14 to approximate  $\pi$ )

- A.  $9.42 \text{ cm}^2$
- B.  $28.26 \text{ cm}^2$
- C.  $18.84 \text{ cm}^2$
- D.  $113.04 \text{ cm}^2$

17. Find the area of the trapezoid pictured below.



- A.  $42 \text{ in}^2$
- B.  $45 \text{ in}^2$
- C.  $90 \text{ in}^2$
- D.  $47 \text{ in}^2$

18. If the area of a triangle is  $42 \text{ ft}^2$  and the height is 7 ft, what is the length of the base?

- A. 3ft      B. 36 ft      C. 6ft      D. 12 ft

19. The area of a rectangle is 40 m. If the length is 8 m, what is the perimeter?

- A. 26 m      B. 5 m      C. 13 m      D. 48 m

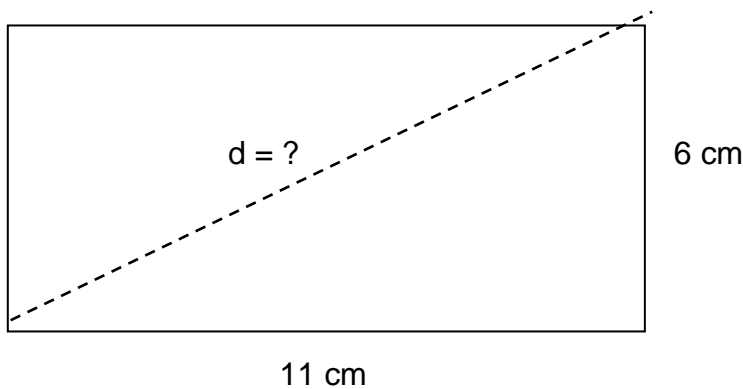
20. Compute :  $4.2 \times 10^8 + 3.5 \times 10^9$

- A.  $7.7 \times 10^8$       B.  $4.55 \times 10$       C.  $3.92 \times 10^9$       D.  $7.7 \times 10^9$

21. A 15 foot ladder is leaning against a building. The base of the ladder is 6 ft from the base of the building. To the nearest foot, how far up the building does the ladder extend?

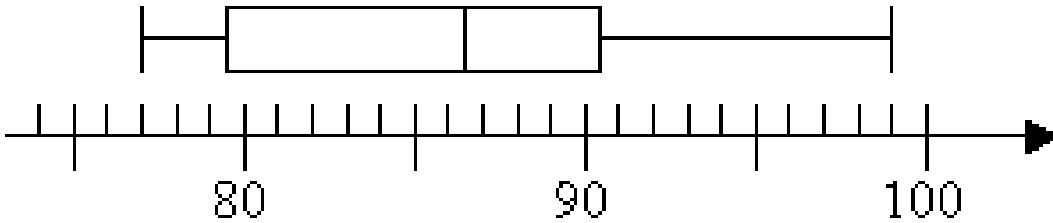
- A. 13 ft      B. 14 ft      C. 16 ft      D. 18 ft

22. To the nearest centimeter, what is the length of the diagonal of the rectangle in the diagram below?



- A. 9 cm      B. 12 cm      C. 13 cm      D. 17 cm

23. A box-and-whisker plot has been used to represent a set of data.



Based on the box-and-whisker plot, what is the median of the set of data?

- A. Approximately 76
- B. Approximately 79
- C. Approximately 87
- D. Approximately 91

24. The table below shows test scores for a class. How many students scored in the 50's?

Stem	Leaf
6	1 2 2 4 4 5
5	0 2 5 6 7 8 8 9
4	0 1 1 3 4 5 6 8 9 9
3	2 4 5 5 8 9
2	0 2 6 8 9
1	1 3 9

- A. 14 students
- B. 6 students
- C. 8 students
- D. 31 students

25. A fertilizer contains 6 parts nitrogen, 9 parts phosphate, and 10 parts potash. How many pounds of nitrogen are in 300 pounds of the compound?

- A. 12 pounds
- B. 15 pounds
- C. 100 pounds
- D. 72 pounds

26. Divide 4900 into three parts using the proportion of 3: 2: 9.

- A. 700: 1200: 2100
- B. 1050: 700: 3150
- C. 1400
- D. 1400: 1400: 1400

**27. 8 people can clean the church in 4 hours. How long will it take for 5 people to complete the job?**

- A. 2.5 hours
- B. 6.4 hours
- C. 7 hours
- D. 8.4 hours

**28. A group of 900 people have provisions to last 8 weeks. How long will the provisions last if 100 extra people join the group?**

- A.  $\frac{8}{9}$  weeks
- B.  $6\frac{2}{3}$  weeks
- C.  $7\frac{1}{5}$  weeks
- D.  $8\frac{8}{9}$  weeks

**29. A 2 kg meatloaf will serve 12 people. How much meatloaf is needed to serve 16 people?**

- A. 96 kg
- B.  $2\frac{2}{3}$  kg
- C. 3 kg
- D. 4 kg

**30. What is the x-intercept of the linear equation  $8x + 3y = 48$ ?**

- A. 16
- B. 3
- C. 6
- D. 8

**31. What is the y-intercept of the equation  $6x + 2y = 24$ ?**

- A. 2
- B. 12
- C. 6
- D. 4

32. Find the slope of the line through the points (9,2) and (6,7).

A.  $\frac{-5}{3}$

B.  $\frac{-3}{5}$

C.  $\frac{5}{3}$

D.  $\frac{3}{5}$

33. Find the slope of the line whose equation is  $6x - 9y = 18$ .

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

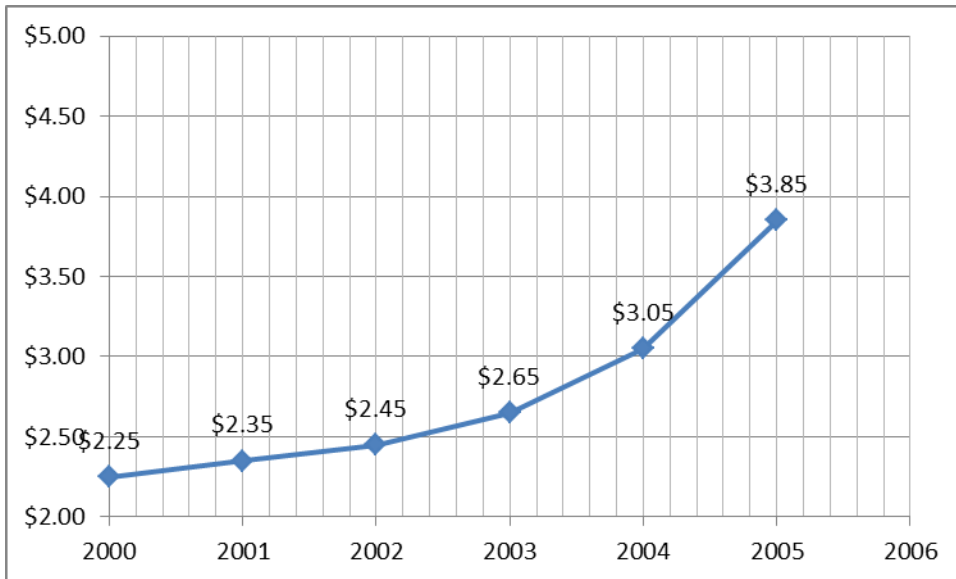
B.  $\frac{-2}{3}$

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

D.  $\frac{-3}{2}$

34. Using the graph below which is the best prediction of the price of lunches for 2006?

School Lunch Price



A. \$ 4.05

B. \$ 4.20

C. \$ 4.65

D. \$ 5.00

**35. A computer salesman is given the option of being paid using one of the following two pay scales.**

**Option 1 - \$9.00/hour plus \$250 for each computer he sells**

**Option 2 - \$50/hour**

**A. If the salesman works 20 hours and sells a total of 4 computers, how much would he make under Option 1? (show your work)**

**B. How much would he make under Option 2?**

**C. Which option provides the salesman with the highest income in this situation?  
By how much?**



