

1. Express 0.00358 as a numeral in Scientific Notation

- A. 0.358×10^{-2} B. 0.358×10^2 C. 3.58×10^{-3} D. 3.58×10^3

2. Convert $0.\overline{56}$ to a fraction in simplest form.

- A. $\frac{56}{100}$ B. $\frac{56}{99}$ C. $\frac{17}{30}$ D. $\frac{28}{50}$

3. If $\overline{-6}g = \overline{-54}$ then $g =$

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

4. If $w - \overline{-23} = 56$ then $w =$

- A. 59 B. $\overline{-33}$ C. 33 D. $\overline{-59}$

5. If $6n + 4 = 46$ then $n =$

- A. $8\frac{1}{3}$ B. 7 C. $53\frac{2}{3}$ D. 10

6. If $\frac{s}{6} + 5 = 9$ then $s =$

- A. $\frac{2}{3}$ B. 49 C. 84 D. 24

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 $r + 7 < 19$ then the solution set for r is

- A. $r < 11$ B. $r < -11$ C. $r < 27$ D. $r > 27$

9. If $8 - 2n < 12$ then

- A. $n < 2$ B. $n < -10$ C. $n > -6$ D. $n > -2$

10. If $5p - 6 > 10$ then

- A. $p < 3.2$ B. $p > 0.8$ C. $p > 3.2$ D. $p < 0.8$

11. Simplify: $4x - 5y + 18x + 7y$

- A. $24xy$
B. $22x + 2y$
C. $-14x - 2y$
D. $22x - 2y$

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

- A. $-9a + 17b$
B. $-9a - 7b$
C. $-9a + 7b$
D. $-9a + b$

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

- A. $12 - 2n$
- B. $12 + 2n$
- C. $2n - 12$
- D. $n - 12$

14. Simplify : 3^{-2}

- A. $\frac{1}{9}$
- B. -9
- C. $\frac{3}{2}$
- D. $\frac{-1}{9}$

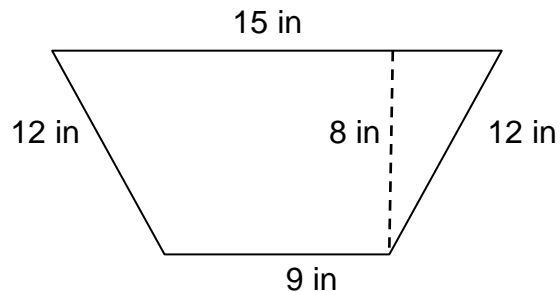
15. Simplify : $^{-}4^2$

- A. $\frac{1}{16}$
- B. $^{-}16$
- C. 16
- D. $\frac{-1}{16}$

16. To the nearest hundredth, what is the area of a circle with a diameter of 20 cm?
(use 3.14 to approximate π)

- A. 62.80 cm^2
- B. 314.00 cm^2
- C. 1256.00 cm^2
- D. 31.40 cm^2

17. Find the area of the trapezoid pictured below



- A. 48 in^2
- B. 96 in^2
- C. 144 in^2
- D. 192 in^2

18. If the area of a triangle is 56 ft^2 and the height is 8 ft, what is the length of the base?

- A. 3.5 ft B. 48 ft C. 7ft D. 14 ft

19. The area of a rectangle is 60 m. If the length is 12 m, what is the perimeter?

- A. 34 m B. 5 m C. 17 m D. 72 m

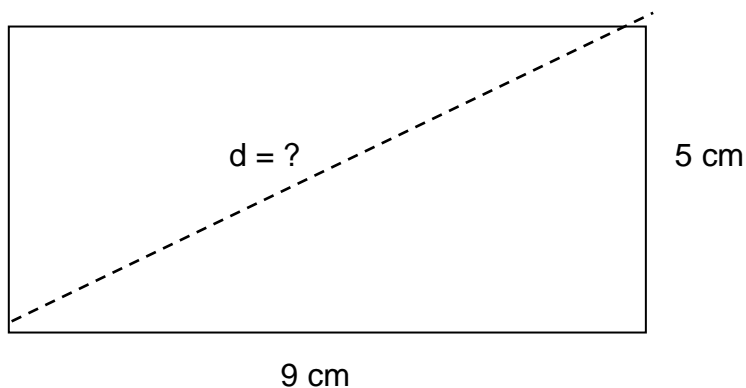
20. Compute : $3.5 \times 10^8 + 5.2 \times 10^9$

- A. 8.7×10^8 B. 2.3×10 C. 5.55×10^9 D. 8.7×10^9

21. A 20 foot ladder is leaning against a building. The base of the ladder is 7 ft from the base of the building. To the nearest foot, how far up the building does the ladder extend?

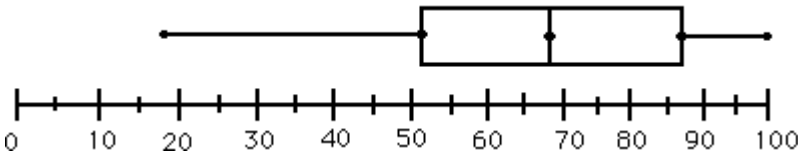
- A. 18 ft B. 19 ft C. 27 ft D. 13 ft

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



- A. 14 cm B. 28 cm C. 10 cm D. 4 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 16
- B. Approximately 51
- C. Approximately 68,
- D. Approximately 86

24. The table below shows test scores for a class. How many students scored in the 40's?

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

- A. 5 students
- B. 6 students
- C. 11 students
- D. 24 students

25. A compound contains 8 parts sulfur, 12 parts potassium nitrate, and 15 parts charcoal. How many pounds of sulfur are in 700 pounds of the compound?

- A. 20 pounds
- B. 87.5 pounds
- C. 663 pounds
- D. 160 pounds

26. Divide 8400 into three parts using the proportion of 2: 4: 8.

- A. 600: 1200: 2400
- B. 1200: 2400: 4800
- C. 2800
- D. 2500: 2800: 2800

27. 24 people can construct a house in 15 days. But the owner would like to finish the work in 10 days. How many more people should he employ?

- A. 16 people
- B. 12 people
- C. 6 people
- D. 36 people

28. A farmer has enough grain to feed 50 cattle for 10 days. He sells 10 cattle. For how many days will the grain last now?

- A. 15 days
- B. 5 days
- C. 12.5 days
- D. 8 days

29. Suppose it takes 48 chicken fingers to feed Mr. Young's 4th grade class of 20 students. How many chicken fingers would be needed for 30 students?

- A. 58 fingers
- B. 60 fingers
- C. 72 fingers
- D. 32 fingers

30. What is the x-intercept of the linear equation $4x + 5y = 40$?

- A. 8
- B. 5
- C. 10
- D. 4

31. What is the y-intercept of the equation $3x + 4y = 24$?

- A. 8
- B. 6
- C. 3
- D. 4

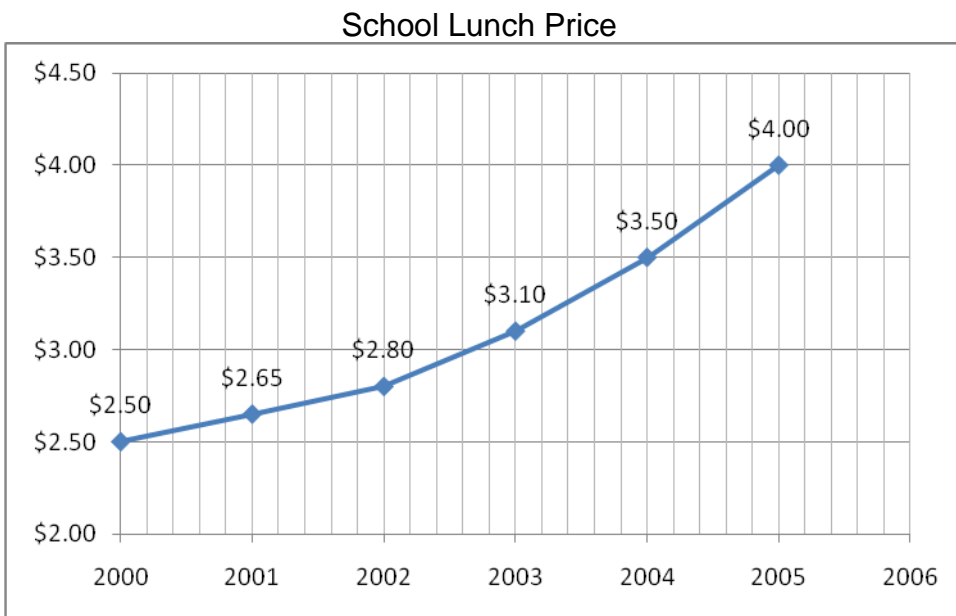
32. Find the slope of the line through the points (4,5) and (9,2).

- A. $\frac{-3}{5}$ B. $\frac{-5}{3}$ C. $\frac{5}{3}$ D. $\frac{3}{5}$

33. Find the slope of the line whose equation is $3x - 8y = 25$.

- A. $\frac{8}{3}$ B. $\frac{-8}{3}$ C. $\frac{3}{8}$ D. $\frac{-3}{8}$

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



- A. \$ 4.05 B. \$ 4.50 C. \$4.60 D. \$4.90

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

Option 1 - \$8.00/hour plus \$1.50 for each pair of shoes he sells

Option 2 - \$10.50/hour

A. If the salesman works 30 hours and sells a total of 60 pairs of shoes, how much would he make under Option 1? (show your work)

B. How much would he make under Option 2?

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

