1. $84.3 - 63.76 = $ _____

   a. 20.64   b. 20.54   c. 21.64   d. 20.66

2. $\frac{3}{8} + \frac{1}{5} = $ _____

   a. $\frac{29}{40}$ b. $\frac{4}{13}$ c. $\frac{23}{40}$ d. $\frac{4}{40}$

3. $|-6+3| + |4|$

   a. 7   b. 13   c. 1   d. -1

4. Write 0.042 as a percent.

   a. 42%   b. 4.2%   c. 0.42%   d. 0.00042%

5. $(0.039)(0.48) = $ _____

   a. 0.468   b. 0.0468   c. 0.01872   d. 0.1872

6. A school district is building a new school. Each classroom will hold up to 30 students. What is the minimum number of classrooms the new school must have if the district has 936 students?

   a. 32   b. 28,080   c. 31   d. none of these

7. $-10 - (4 + (-8)) = $ _____

   a. −14   b. −22   c. 2   d. −6

8. $6\frac{1}{2} \div 2\frac{1}{4} = $ _____

   a. $\frac{9}{26}$ b. $14\frac{5}{8}$ c. $2\frac{8}{9}$ d. $3\frac{1}{4}$

9. Express $\frac{5}{8}$ as an equivalent decimal.

   a. 62.5   b. 1.6   c. 0.625   d. 0.62

10. $\sqrt{81} + \sqrt{19} - \sqrt{16} = $ _____

    a. $5 + \sqrt{19}$ b. 6   c. $\sqrt{84}$ d. $5\sqrt{19}$

11. A $180 microwave is on sale for 25% off. What is the sale price?

    a. $112.50   b. $1187.50   c. $113.50   d. none of these

12. Suppose you can do the first $\frac{2}{3}$ of this exam in 24 minutes. If you continue to work at the same rate, how many minutes will it take you to do the entire exam?

    a. 16   b. 40   c. 36   d. 32

13. 90,540,000,000 written in scientific notation = _____

    a. 0.9054×10^{11} b. 9.054×10^{10} c. 9.054×10^{-10} d. 9.054×10^{11}

14. Round 6,539.6246 to the nearest hundredth.

    a. 6,500.62   b. 6,539.62   c. 6,539.63   d. 6500

15. What number is 130% of 90?

    a. 92.7   b. 120   c. 69.23   d. 117

16. $(-6)^2 - 12 \div 3 = $ _____

    a. 8   b. 32   c. -40   d. 0

17. Two thousand students were randomly chosen and asked whether or not they smoke. The resulting data appears in the following table.

	Female	Male	Total
smoker	320	480	800
non-smoker	680	520	1200
Total	1000	1000	2000

What percent of the smokers are female?

a. 16%   b. 40%   c. 68%   d. none of these

18.   7 yards 1 foot   5 inches
      − 4 yards 2 feet   7 inches
    _____

a. 2 yards 1 foot 8 inches   b. 2 yards 8 feet 8 inches
c. 2 yards 1 foot 10 inches   d. 3 yards 1 foot 2 inches

19. The graph below shows the number of lunches sold at Oswego Elementary School for a certain week. If lunches cost $1.40 each, how much more money was spent by students on Friday than on Monday?

Number of Lunches Sold at Oswego Elementary School
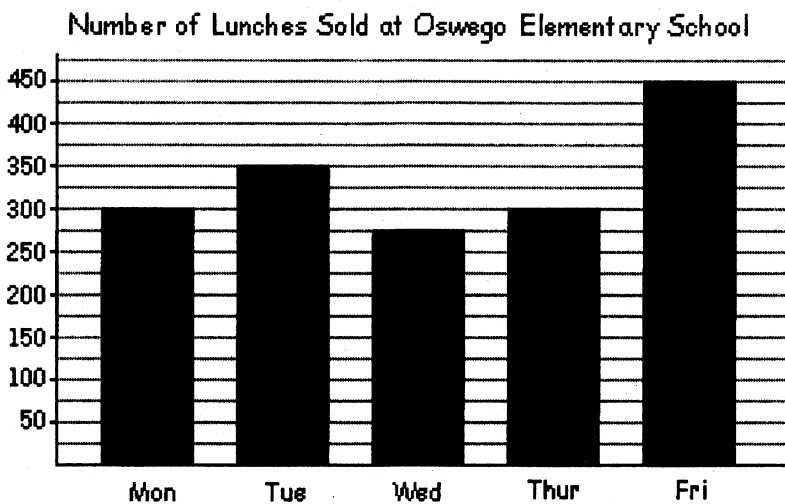
a. $150   b. $210   c. $1050   d. none of these

20. If b is any integer and m is a positive integer, then b mod m is defined as the remainder when b is divided by m. Determine 21 mod 5.

a. 4　　　　　　b. 1　　　　　　c. 16　　　　　　d. 2

21. The graph below shows the temperature in degrees Fahrenheit of a sick child from noon until 6:00 pm. Which of the following statements is <u>not</u> supported by the graph?

a. There was no change in temperature between 2:00 pm and 3:00 pm.
b. The child's temperature decreased more rapidly between 1:00 pm and 2:00 pm than between 4:00 pm and 5:00 pm.
c. The child's temperature increased at the rate of 2° per hour between 2:00 pm and 4:00 pm.
d. The child's temperature peaked at 4:00.
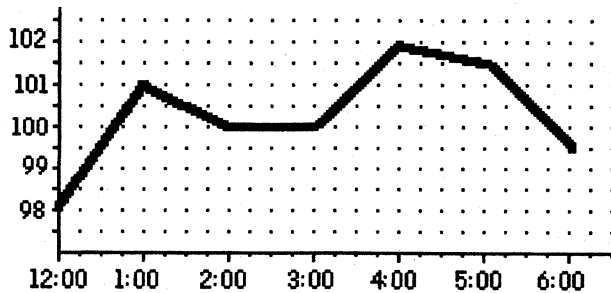
22. Mickey's final mathematics average is determined by his average on three equally weighted exams. He has an average of 78 on the first two exams. What will be his final course average if he scores 84 on the third exam?

a. 81　　　　　　b. 80　　　　　　c. 54　　　　　　d. none of these

23. If $-\frac{3}{8}x = 24$, then x = _____

a. –9　　　　　　b. 64　　　　　　c. 9　　　　　　d. –64

24. If 6 = y + 13, then 3y = _____

a. –7　　　　　　b. –21　　　　　　c. 57　　　　　　d. 21

25. Which of the following statements are false?

i. $\dfrac{a}{c} \cdot \dfrac{b}{c} = \dfrac{a \cdot b}{c}$　　　ii. $\sqrt{a} + \sqrt{b} = \sqrt{a+b}$　　　iii. $2^5 \cdot 2^8 = 2^{13}$
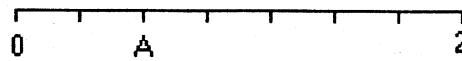
a. (i) and (ii)　　　　　　　　　b. (i) and (iii)
c. (ii) and (iii)　　　　　　　　 d. (i), (ii), and (iii)

26. A number line from 0 to 2 is divided into seven equivalent segments as shown. What fraction names point A?

```
┌─┬─┬─┬─┬─┬─┐
0   A           2
```

a. $\dfrac{2}{7}$　　　b. $\dfrac{3}{7}$　　　c. $\dfrac{4}{7}$　　　d. none of these

27. If $x = -2$ and $w = 5$, what is the value of $\dfrac{4w - x^2}{x}$?

a. 22　　　b. −12　　　c. $16\frac{1}{2}$　　　d. −8

28. Which of the following best describes the shaded region?

```
◄─┬─┬─┬─┬─┬─┬─┬─┬─┬─┬─┬─┬─►
 -6 -5 -4 -3 -2 -1  0  1  2  3  4  5  6
```

a. $-1 \geq x \leq 3$　　b. $-1 \leq x \leq 3$　　c. $-1 \leq x \geq 3$　　d. $-1 \geq x \geq 3$

29. If $5y - 3 > y$, which of the following gives all possible values of y?

a. $y > \dfrac{3}{4}$　　　b. $y > \dfrac{4}{3}$　　　c. $y > \dfrac{3}{5}$　　　d. $y < \dfrac{3}{4}$

30. Homer entered a pie eating contest. To prepare for the contest, Homer went into training for 3 days. Each day, he ate 4 more pies than the day before. Homer ate 42 pies in all in training. How many pies did he eat on the first day?

    a. 8   b. 10   c. 14   d. none of these

31. The number N is 8 less than the square root of the product of a and b. Which of the following equations expresses this relationship?

    a. $N = 8 - \sqrt{ab}$ b. $N = \sqrt{ab - 8}$

    c. $N = \sqrt{ab} - 8$ d. $N = (ab)^2 - 8$

32. If $\triangle = \square\square$ and $\square = \bigcirc\bigcirc$ then $\triangle + \square = $ _____ ?

    a. $\bigcirc\bigcirc\bigcirc\bigcirc$ b. $\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc\bigcirc$

    c. $\triangle\triangle\square\square$ d. none of these

33. You are rollerblading with a friend on a trail that is 2 miles long (2 miles = 10,560 feet). You skate 3600 feet and look back to see your friend far behind. You turn around and backtrack 1000 feet to be with your friend. Moving forward again, you skate for 6000 feet before you realize your friend is no longer behind you. Again you turn around and backtrack 1600 feet to meet your friend. How far do you have to skate to get to the end of the trail?

    a. 1640 feet   b. 7000 feet   c. 3560 feet   d. none of these

34. A sports field has length 130 feet and width 45 feet. Nine-tenths of the area is to be covered with astroturf at a cost of $20 per square yard. You know that:

> 1 square yard = 9 square feet

Determine the total cost of the astroturf.

    a. $585   b. $13,000   c. $105,300   d. $11,700