1. $(1 + 11 + 21 + 31 + 41) + (9 + 19 + 29 + 39 + 49) =$

   A) 150 B) 199 C) 200 D) 249 E) 250

2. $\frac{2}{10} + \frac{4}{100} + \frac{6}{1000} =$

   A) .012 B) .0246 C) .12 D) .246 E) 246

3. Which of the following numbers is the largest?

   A) .99 B) .9099 C) .9 D) .909 E) .9009

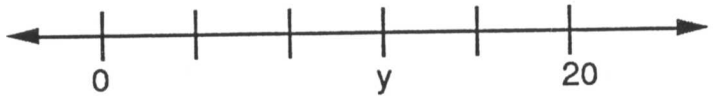
4. Estimate to determine which of the following numbers is closest to $\frac{401}{.205}$.

   A) .2 B) 2 C) 20 D) 200 E) 2000

5. $-15 + 9 \times (6 \div 3) =$

   A) –48 B) –12 C) –3 D) 3 E) 12

6. If the markings on the number line are equally spaced, what is the number y?



   A) 3 B) 10 C) 12 D) 15 E) 16

7. If the value of 20 quarters and 10 dimes equals the value of 10 quarters and n dimes, then n =

   A) 10 B) 20 C) 30 D) 35 E) 45

8. $(2 \times 3 \times 4)\left(\frac{1}{2} + \frac{1}{3} + \frac{1}{4}\right) =$

   A) 1 B) 3 C) 9 D) 24 E) 26

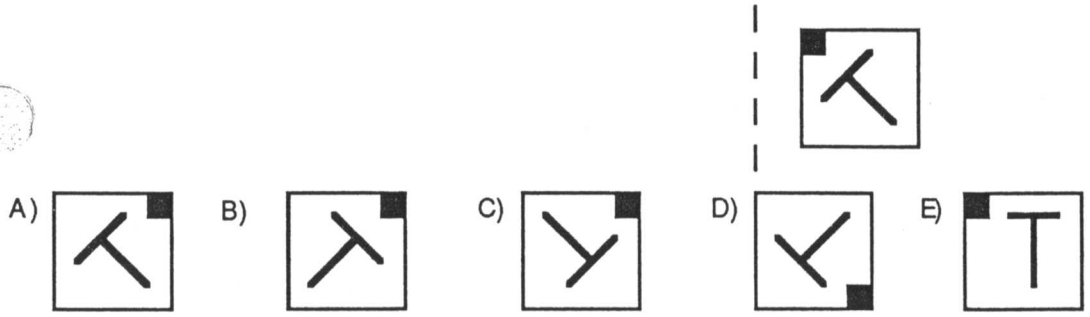
9. There are 2 boys for every 3 girls in Ms. Johnson's math class. If there are 30 students in her class, what percent of them are boys?

   A) 12% B) 20% C) 40% D) 60% E) $66\frac{2}{3}\%$

10. What is the number of degrees in the smaller angle between the hour hand and the minute hand on a clock that reads seven o'clock?

    A) 50° B) 120° C) 135° D) 150° E) 165°

11. Which of the five "T-like shapes" would be symmetric to the one shown with respect to the dashed line?



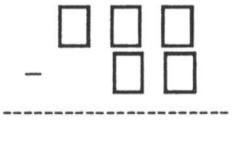
12. $\dfrac{1-\frac{1}{3}}{1-\frac{1}{2}} =$

A) $\frac{1}{3}$ B) $\frac{2}{3}$ C) $\frac{3}{4}$ D) $\frac{3}{2}$ E) $\frac{4}{3}$

13. $\dfrac{9}{7 \times 53} =$

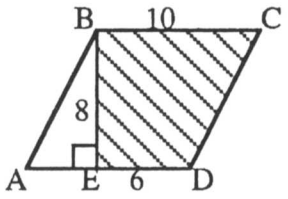
A) $\dfrac{.9}{.7 \times 53}$ B) $\dfrac{.9}{.7 \times .53}$ C) $\dfrac{.9}{.7 \times 5.3}$ D) $\dfrac{.9}{7 \times .53}$ E) $\dfrac{.09}{.07 \times .53}$

14. When placing each of the digits 2,4,5,6,9 in exactly one of the boxes of this subtraction problem, what is the smallest difference that is possible?



A) 58 B) 123 C) 149 D) 171 E) 176

15. The area of the shaded region BEDC in parallelogram ABCD is



A) 24 B) 48 C) 60 D) 64 E) 80

16. In how many ways can 47 be written as the sum of two primes?

A) 0 B) 1 C) 2 D) 3 E) more than 3

17. The number N is between 9 and 17. The average of 6, 10, and N could be

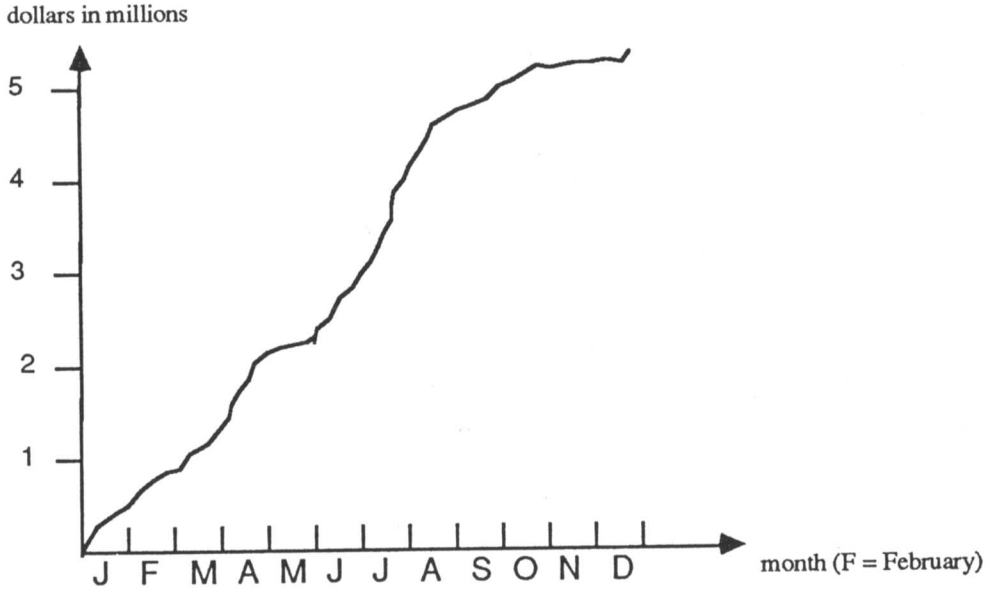
A) 8 B) 10 C) 12 D) 14 E) 16

18. Many calculators have a reciprocal key $\boxed{\frac{1}{x}}$ that replaces the current number displayed with its reciprocal. For example, if the display is $\boxed{4}$ and the $\boxed{\frac{1}{x}}$ key is depressed, then the display becomes $\boxed{.25}$. If $\boxed{32}$ is currently displayed, what is the fewest number of times you must depress the $\boxed{\frac{1}{x}}$ key so the display again reads $\boxed{32}$?

A) 1 B) 2 C) 3 D) 4 E) 5

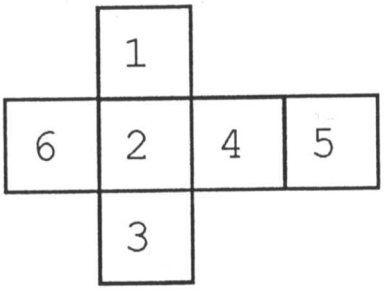
19. The graph below shows the total accumulated dollars (in millions) spent by the Surf City government during 1988. For example, about .5 million had been spent by the beginning of February and approximately 2 million by the end of April. Approximately how many millions of dollars were spent during the summer months of June, July, and August?

A) 1.5 B) 2.5 C) 3.5 D) 4.5 E) 5.5



20. The figure may be folded along the lines shown to form a number cube. Three number faces come together at each corner of the cube. What is the largest sum of three numbers whose faces come together at a corner?

A) 11 B) 12 C) 13 D) 14 E) 15



21. Jack had a bag of 128 apples. He sold 25% of them to Jill. Next he sold 25% of those remaining to June. Of those apples still in his bag, he gave the shiniest one to his teacher. How many apples did Jack have then?

A) 7 B) 63 C) 65 D) 71 E) 111

22. The letters A,J,H,S,M,E and the digits 1,9,8,9 are "cycled" separately as follows and put in a numbered list:

AJHSME 1989

1. JHSMEA 9891
2. HSMEAJ 8919
3. SMEAJH 9198

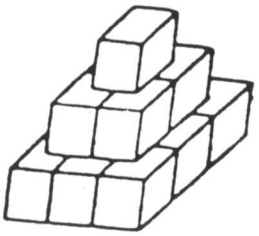
.....

What is the number of the line on which AJHSME 1989 will **appear for the first time?**

A) 6 B) 10 C) 12 D) 18 E) 24

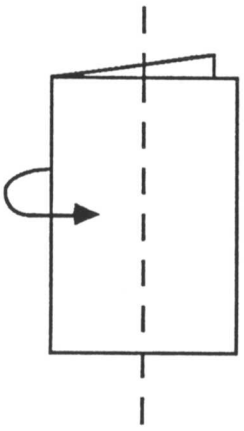
23. An artist has 14 cubes, each with an edge of 1 meter. She stands them on the ground to from a sculpture as shown. She then paints the exposed surface of the sculpture. How many square meters does she paint?

A) 21 B) 24 C) 33 D) 37 E) 42



24. **Suppose a square piece of paper is folded in half vertically. The folded paper is then cut in half along the dashed line. Three rectangles are formed–a large one and two small ones. What is the ratio of the perimeter of one of the small rectangles to the perimeter of the large rectangle?**

A) $\frac{1}{2}$ B) $\frac{2}{3}$ C) $\frac{3}{4}$ D) $\frac{4}{5}$ E) $\frac{5}{6}$



25. Every time these two wheels are spun, two numbers are selected by the pointers. What is the probability that the sum of the two selected numbers is even?

A) $\frac{1}{6}$ B) $\frac{3}{7}$ C) $\frac{1}{2}$ D) $\frac{2}{3}$ E) $\frac{5}{7}$