

1. THE SUM OF EVEN INTEGERS:

The sum of the even numbers between 1 and k is 79×80 , where k is an odd number, then $k = ?$

- (A) 79
- (B) 80
- (C) 81
- (D) 157
- (E) 159

2. THE PRICE OF BUSHEL:

The price of a bushel of corn is currently \$3.20, and the price of a peck of wheat is \$5.80. The price of corn is increasing at a constant rate of $5x$ cents per day while the price of wheat is decreasing at a constant rate of $2^{1/2}x - x$ cents per day. What is the approximate price when a bushel of corn costs the same amount as a peck of wheat?

- (A) \$4.50
- (B) \$5.10
- (C) \$5.30
- (D) \$5.50
- (E) \$5.60

3. LEAP YEAR:

How many randomly assembled people are needed to have a better than 50% probability that at least 1 of them was born in a leap year?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5

4. ADDITION PROBLEM:

$AB + CD = AAA$, where AB and CD are two-digit numbers and AAA is a three digit number; A , B , C , and D are distinct positive integers. In the addition problem above, what is the value of C ?

- (A) 1
- (B) 3
- (C) 7
- (D) 9
- (E) Cannot be determined

5. RACE:

A and B ran, at their respective constant rates, a race of 480 m. In the first heat, A gives B a head start of 48 m and beats him by $1/10$ th of a minute. In the second heat, A gives B a head start of 144 m and is beaten by $1/30$ th of a minute. What is B's speed in m/s?

- (A) 12
- (B) 14
- (C) 16
- (D) 18
- (E) 20

6. PROBABILITY OF DRAWING:

A bag contains 3 red, 4 black and 2 white balls. What is the probability of drawing a red and a white ball in two successive draws, each ball being put back after it is drawn?

- (A) $2/27$
- (B) $1/9$

- (C) $\frac{1}{3}$
- (D) $\frac{4}{27}$
- (E) $\frac{2}{9}$

7. THE DISTANCE BETWEEN THE CIRCLE AND THE LINE:

What is the least possible distance between a point on the circle $x^2 + y^2 = 1$ and a point on the line $y = \frac{3}{4}x - 3$?

- A) 1.4
- B) $\sqrt{2}$
- C) 1.7
- D) $\sqrt{3}$
- E) 2.0

8. THE AVERAGE TEMPERATURE:

The average of temperatures at noontime from Monday to Friday is 50; the lowest one is 45, what is the possible maximum range of the temperatures?

- A. 20
- B. 25
- C. 40
- D. 45
- E. 75

9. PROBABILITY OF INTEGER BEING DIVISIBLE BY 8:

If n is an integer from 1 to 96 (inclusive), what is the probability for $n(n+1)(n+2)$ being divisible by 8?

- A. 25%
- B 50%
- C 62.5%
- D. 72.5%
- E. 75%

10. SUM OF INTEGERS:

If the sum of five consecutive positive integers is A , then the sum of the next five consecutive integers in terms of A is:

- A. $A+1$ inquiry
- B. $A+5$
- C $A+25$
- D $2A$
- E. $5A$