

Mathematics Olympiad Competition
Selection Text for Provincial Training Pools - 2014

Category I

Index No:

Grade:

School:

20 Questions.

Answer all Questions.

Time: 1 hour

There are four options under each question. **Underline** the option which presents the answer correctly.

1. What is the highest common factor of 3675 and 2058 ?
(1) 49 (2) 145 (3) 147 (4) 245

2. What is the sum of all the factors of 64 ?
(1) 125 (2) 126 (3) 127 (4) 128

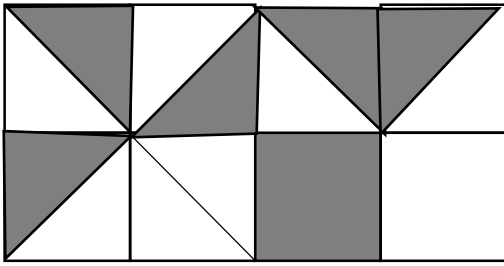
3. What is the smallest unit fraction when $\frac{4}{5}$ is expressed as a sum of three unit fractions?
(1) $\frac{1}{2}$ (2) $\frac{1}{4}$ (3) $\frac{1}{20}$ (4) $\frac{1}{40}$

4. $\frac{6}{13}$ is given below as the sum of three unit fractions.
$$\frac{6}{13} = \frac{1}{3} + \frac{1}{x} + \frac{1}{312}$$
 What is the value of x ?
(1) 2 (2) 4 (3) 6 (4) 8

5.
$$\begin{array}{r} A \\ A \\ + H \\ \hline HA \end{array}$$
 A and H are positive integers less than 10. What is the value of $H^2 + A$?
(1) 10 (2) 9 (3) 8 (4) 7

6. There are three digits in the number printed on Mr. Perera's railway season ticket. The product of the three digits is 216 and the sum of the three digits is 19. What is the difference of the largest number and the smallest number that could be formed using these digits?
(1) 450 (2) 468 (3) 495 (4) 549

7.



What fraction of the whole figure is shaded?

- (1) $\frac{5}{8}$ (2) $\frac{5}{16}$ (3) $\frac{3}{8}$ (4) $\frac{7}{16}$

8. How many numbers are there between 10 and 100 which contain the digit 2 ?

- (1) 15 (2) 16 (3) 17 (4) 18

9. There are 20 faces and 12 vertices in a certain solid body. How many edges are there?

- (1) 30 (2) 32 (3) 34 (4) 36

10. When a certain number divided by 40 it leaves a remainder of 19. What is the remainder when this number is divided by 8 instead of 40 ?

- (1) 4 (2) 3 (3) 2 (4) 1

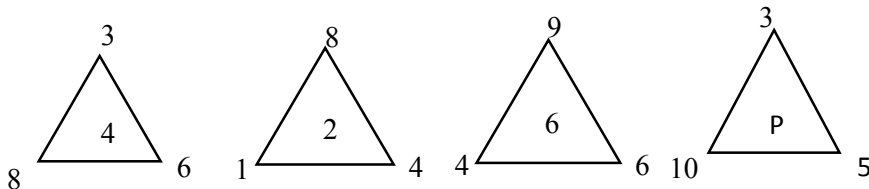
11. $327 \times 19 = 6213$ is given. What is the value of 1.09×570 ?

- (1) 6.213 (2) 62.13 (3) 621.3 (4) 6213

12. What is the value of $125 \left(1 + \frac{1}{5} + \frac{1}{5^2} + \frac{1}{5^3}\right)$?

- (1) 156 (2) 155 (3) 154 (4) 152

13.



Study the pattern of the numbers in the above figures. What is the number equal to P ?

- (1) 3 (2) 4 (3) 5 (4) 6

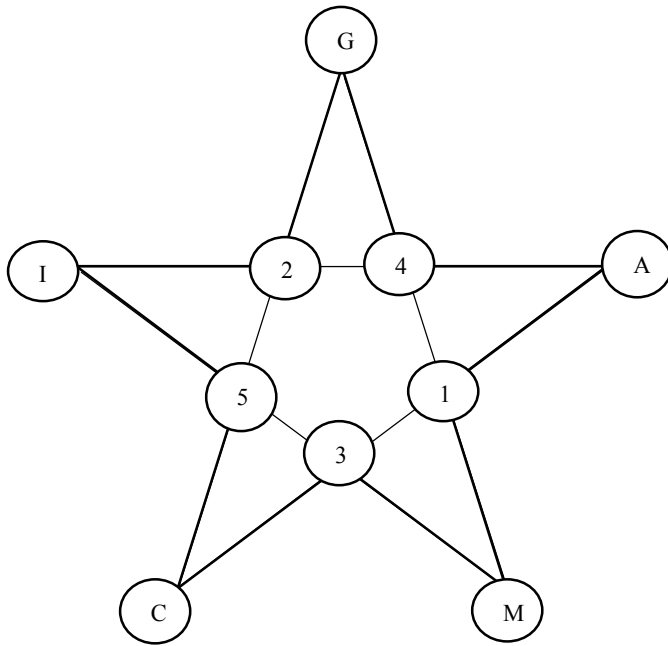
14. Four digit numbers are written using the digits 1, 4, 5 and 7. No digits are repeated. How many even numbers are among those?

- (1) 5 (2) 6 (3) 7 (4) 8

15. The first day of a certain month is a Monday. What is the sum of the numbers represent the all Fridays of that month?

- (1) 58 (2) 62 (3) 66 (4) 70

16.



The sum of the numbers in each line is 28 in this magic star.

What is the value $M + A + G + I + C$?

- (1) 25 (2) 35
- (3) 45 (4) 55

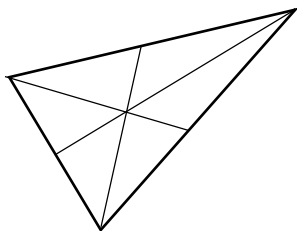
17. $12345679 \times 9 = 111\ 111\ 111$ is given. What is the value of 12345679×54 ?

- (1) 333 333 333 (2) 444 444 444 (3) 555 555 555 (4) 666 666 666

18. A pack of yoghurt is Rs. 30.00 and a pack of sterilized milk is Rs. 50.00 at a certain place where milk productions are sold. During one hour from 9.00 am to 10.00 am of a contain day Rs.360.00 was collected by selling these two products. Find the maximum number of sterilized milk packs sold during this hour.

- (1) 6 (2) 7 (3) 8 (4) 9

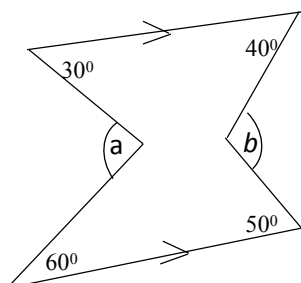
19.



How many triangles consist in this figure?

- (1) 13 (2) 15 (3) 16 (4) 18

20.



Find the value of $a + b$ using the data given in the figure.

- (1) 90° (2) 180°
- (3) 270° (4) 360°