

Standard: VII

Mathematics

Time: 2 Hrs

- ♦ 15 minutes is given as cool-off time.
- ♦ Read the questions carefully during this time.
- ♦ Attempt any six activities from the activities given.

Activity 1

$101 \times 102 = 10302$. Analyse the operations given below.

- A. 1.01×10.2
- B. 0.101×10.2
- C. 10.1×10.2
- D. 101×0.102
- E. 1.01×0.102

- a) Which are the operations having the same products?
- b) Find the operations of the largest product and the least product.
- c) When 101 is multiplied by a particular number, we get 1030.2. Find the number from the following.

- A) 102 B) 1.02 C) 10.2 D) 0.102

Activity 2

- a) The sides of a rectangle having perimeter 40 centimetres are in the ratio 1:3. What is the area of the rectangle?
- b) What is the ratio of the area of this rectangle to the area of a square with same perimeter?
- c) Which of the following measurements show the length and breadth in the ratio 3:2 ?

- A. length 3 metres, breadth $1\frac{1}{2}$ metres
- B. length 75 centimetres, breadth 25 centimetres
- C. length 2 metres, breadth 1.5 metres
- D. length 6 centimetres, breadth 4 centimetres

Activity 3

Identify similar operations in the second column that match those in the first column.

- | | | |
|----|-------------------|-------------------|
| a) | $(125 - 75) - 25$ | $125 + (75 + 25)$ |
| b) | $125 - (75 - 25)$ | $125 - (75 + 25)$ |
| c) | $(125 + 75) - 25$ | $(125 - 75) + 25$ |
| d) | $(125 + 75) + 25$ | $125 + (75 - 25)$ |

- c) Which among the following denotes the algebraic form of 3 times a number added to 4 times the same number?

- A) $3x + 4$
B) $4x + 3x$
C) $4x + 3$
D) $4x + 3y$

Activity 4

- a) Write the product of the numbers 5 to 10 as the product of the powers of prime numbers.
b) Which is the greatest power of 3 that can divide the above product?
c) How many zeros are there at the end of the product of numbers from 5 to 10?

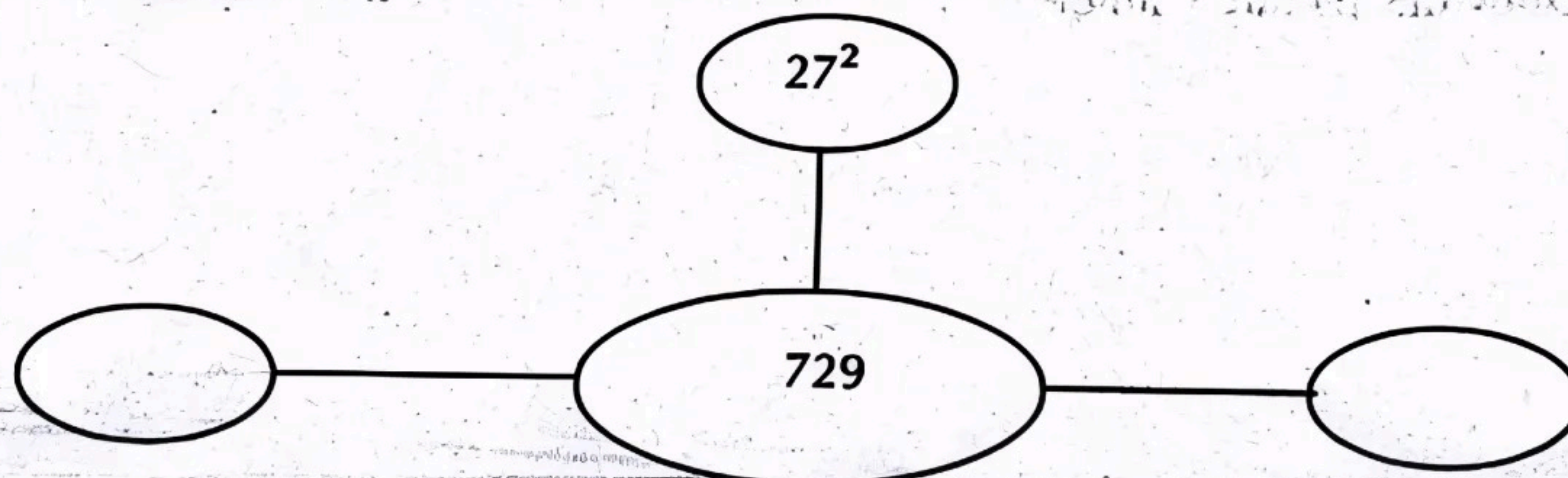
Activity 5

- a) Write 72 as the product of the powers of prime numbers?
b) Write all the factors of 72.
c) Which of the following has 8 factors?

- A) 12×13 B) 16×17 C) 22×23 D) 30×31

Activity 6

- a) 729 is written as the powers of different numbers. Fill the missing ones.



- b) Simplify $\frac{96}{128}$ by writing in exponential form.

- c) Which of the following is the half of 4^6 ?

- A) 4^5 B) 2^6 C) 2^{11} D) 4^3

Activity 7

- a) When a tank is filled to its $\frac{2}{3}$ part, it contains 1000 litres of water. How much water will be in the tank when it becomes full?
b) A rectangle has an area of $12\frac{1}{2}$ square metres and breadth $1\frac{1}{4}$ metres. What is its length?

c) Which is the decimal form of $\left(\frac{1}{2}\right)^3$?

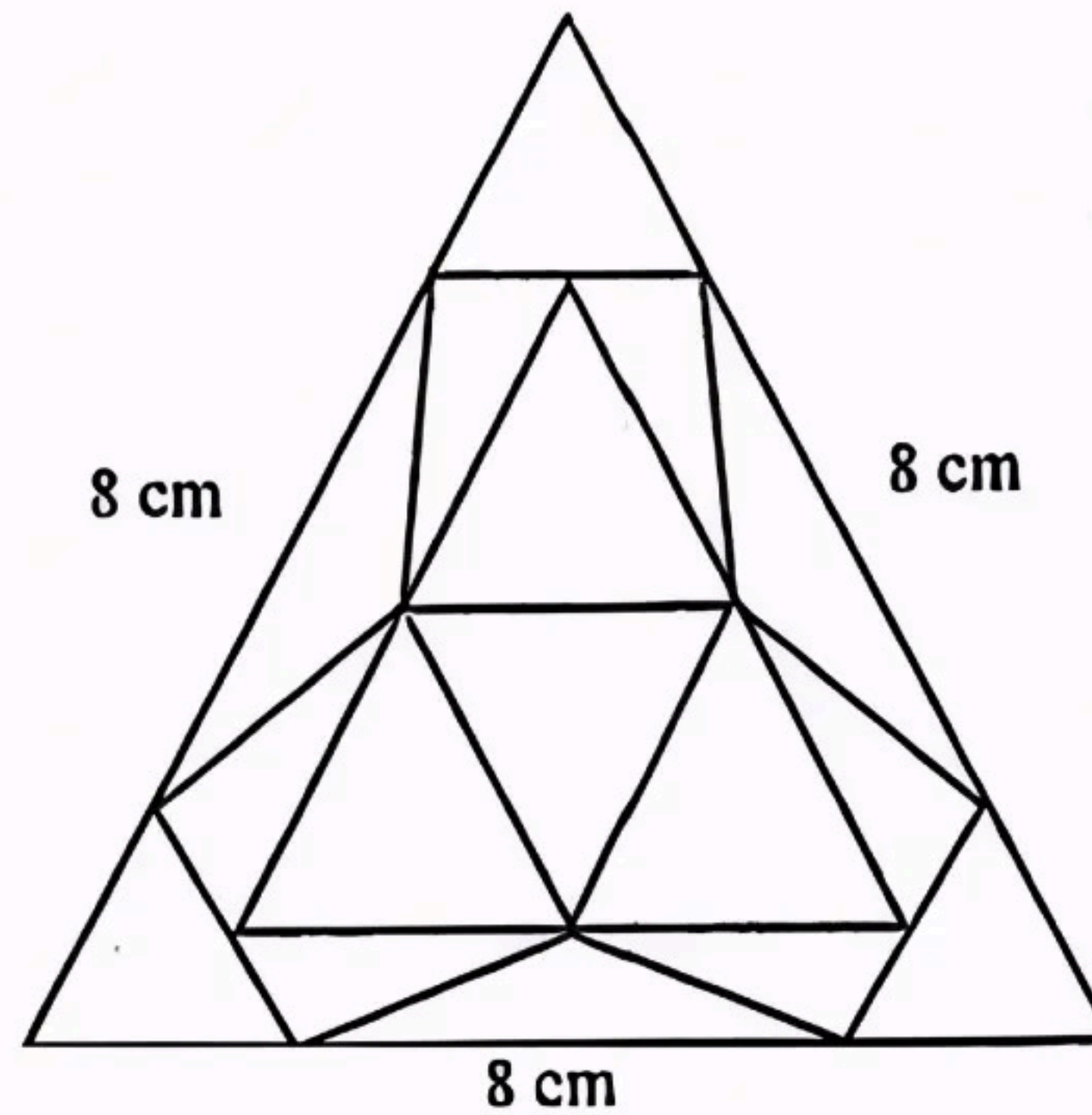
A) 0.250

B) 0.825

C) 0.625

D) 0.125

Activity 8



Draw this picture with the given measurements. Beautify it by shading suitably.