SYNERGY MATHEMATICS OLYMPIAD (SMO)

GRADE V SMO SYLLABUS FRAME WORK & SAMPLE QUESTIONS

MARKS DISTRIBUTION

Section	Marks	Emphasis
A. Mathematical & Logical Reasoning	12	Number sense, computation, fractions, factors, Roman numerals
B. Algebraic Thinking & Mathematical Patterns	10	Negative numbers, BODMAS, ratio/proportion, patterns
C. Geometry & Measurement	10	Measurement, temperature, money, geometry, mensuration, percentage
D. Problem Solving & Data Handling	10	Application, multi-step problems, graphs and data
E. Brain Teasers & Synergy Challenge	8	HOTS, visual reasoning and non-routine problems
TOTAL	**50**	**60 minutes**

Instructions: Choose the correct answer. Read the diagrams and visual data carefully.

1. Which number is 50,000 greater than 4,68,275?

A. 4,18,275 B. 4,68,325 C. 5,18,275 D. 4,78,275

2. Find the value of: 48 ÷ 6 + 7 × 3

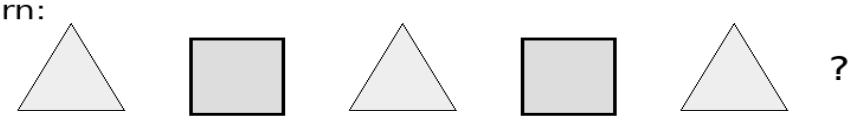
A. 17 B. 29 C. 45 D. 31

3. A water tank is 0.75 full. What fraction of the tank is this in simplest form?

A. ¼ B. ¾ C. 7/5 D. 75/10

4. Study the pattern below. What should come next?

Shape pattern:



A. △ B. □ C. △ D. ○

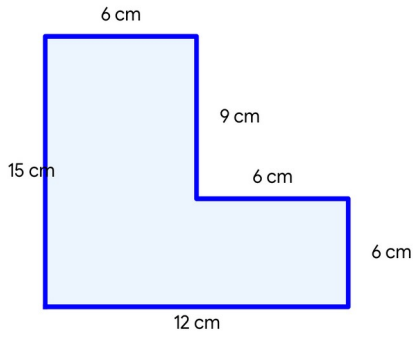
5. Two bells ring every 6 minutes and 8 minutes. If they ring together at 9:00 a.m., after how many minutes will

they ring together again?

A. 12 B. 14 C. 24 D. 48

6. Find the perimeter of the L-shaped composite figure shown below.

A. 48 cm B. 54 cm C. 60 cm D. 72 cm



7. The ratio of red balls to blue balls is 2:3. If there are 12 blue balls, how many red balls are there?

A. 6 B. 8 C. 9 D. 18

8. Look at the figure. Which labelled line represents the vertical line of symmetry?

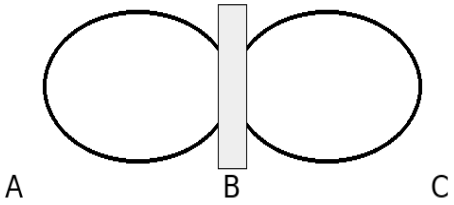
A. Left slanting line

B. Vertical middle line

C. Right slanting line

D. None

Which dotted line is a line of symmetry?



9. A school has 200 students. 25% of them participate in the Mathematics Olympiad club. Of those participants,

40% are girls. How many girls are in the club?

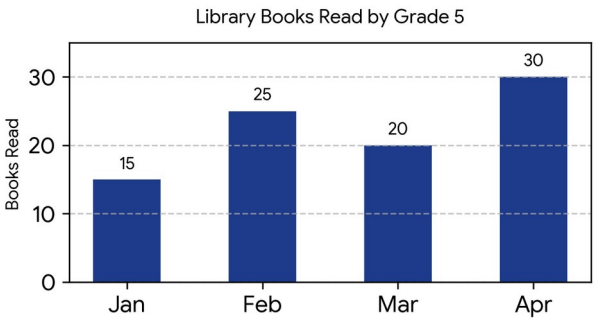
A. 20 B. 40 C. 50 D. 80

10. The bar graph shows the number of books read by Grade 5 students over 4 months. What is the average number of books read per month?

A. 20 **B. 22.5**

C. 25 **D. 27.5**

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ANSWERS

1 -C	**2- B**	**3- B**	**4 - B**	**5-C**	**6 - D**	**7 -B**	**8 – A**	**9 – A**	**10 -B**