SCIENCE OLYMPIAD FOUNDATION

IMO

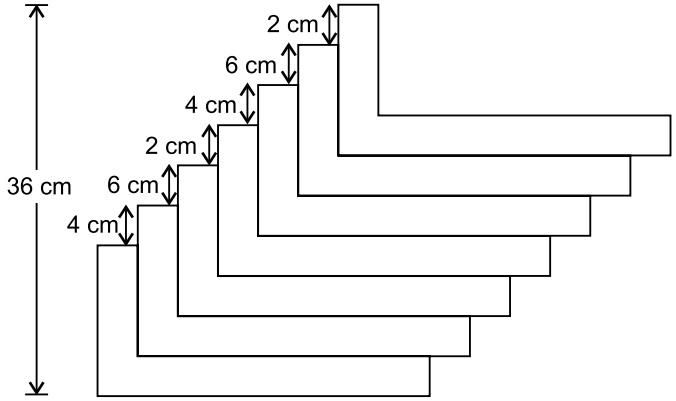
LEVEL - 2

Year 2016-17

1. If ✡ × ✡ stands for 4th multiple of 16 and O + O stands for 3rd multiple of 12, then find the value of ✡ + O.

   A. 26 B. 64 C. 36 D. 42

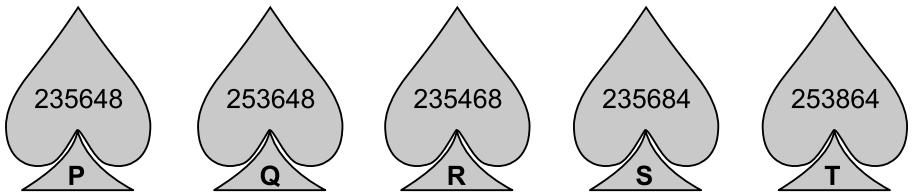
2. Sanchi stacked 7 blocks of wood as shown below. What is the height of the block of wood which is at the bottom (figure not drawn to scale)?



   A. 12 cm B. 24 cm C. 8 cm D. 10 cm

3. Arrange the following numbers in ascending order.

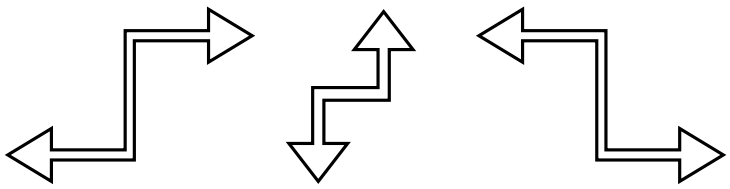
   A. R, P, S, Q, T
   B. T, Q, S, P, R
   C. Q, T, S, P, R
   D. R, P, S, T, Q



4. Garima can make a paper plane in 3 minutes. She started making paper planes at 2:30 pm and took a break of 35 minutes at 4:00 pm. At what time did she finish making 100 paper planes?

   A. 8:31 pm B. 9:00 pm C. 9:05 pm D. 8:05 pm

5. What fraction of lines are sleeping lines in the given figure?



   A. 1/3 B. 1/4 C. 1/6 D. 1/8

SPACE FOR ROUGH WORK

6. Latika has 5 times as many green marbles as red marbles. She has 1230 marbles altogether. If she removes $\left(\frac{1}{5}\right)^{th}$ of green marbles, then how many green marbles are left with her?

A. 205 B. 705 C. 820 D. 720

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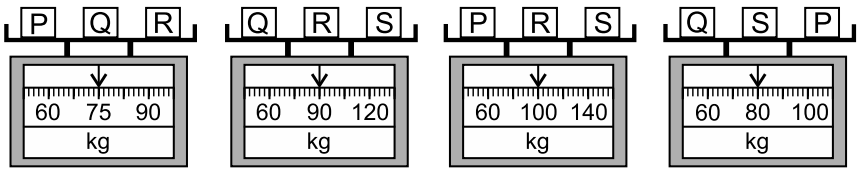
7. Find the total weight of Q and R.

A. 55 kg
B. 45 kg
C. 85 kg
D. 50 kg



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8. How many letters have perpendicular lines?

OLYMPIAD

A. 4 B. 5 C. 3 D. None of these

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9. Find the difference between the greatest 6-digit number and smallest 5-digit number formed by using the digits 9, 8, 3, 4 (each digit must be used at least once).

A. 966354 B. 90654 C. 963546 D. 963564

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10. There were 82 trays of eggs with 312 eggs in each tray. If 1020 eggs were broken, how many unbroken eggs were left in the trays?

A. 25464 B. 25466 C. 24564 D. 25964

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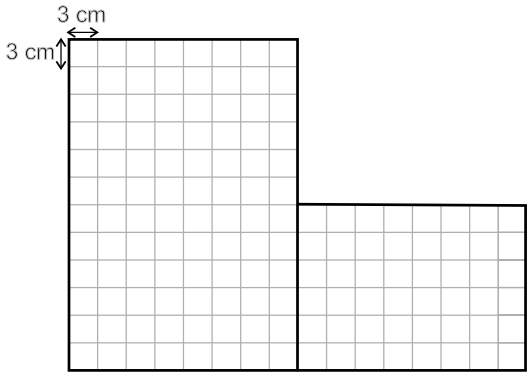
11. The given figure is made up of 2 rectangles. Find the difference between the area of the bigger and smaller rectangle.



A. 432 cm^2 B. 864 cm^2 C. 423 cm^2 D. 846 cm^2

SPACE FOR ROUGH WORK

12. Multiply the smallest 3-digit number formed by using the digits 9, 4, 5 (using each digit only once) with 12. What will be the result?

A. 5940 B. 5498 C. 5508 D. 5058

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13. Some part of a 25 m long pole is inside the ground as shown in Fig. (X). What fraction of the pole is above the ground level.

A. 3/25

B. 247/250

C. 3/250

D. 147/250

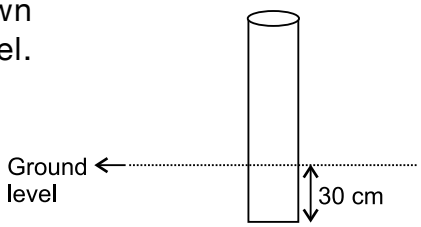

Fig. (X)

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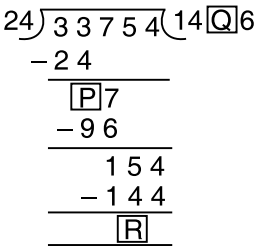
14. Find the value of (P + Q + R) ÷ 2.

A. 9/2

B. 1/2

C. 19/2

D. 15/2



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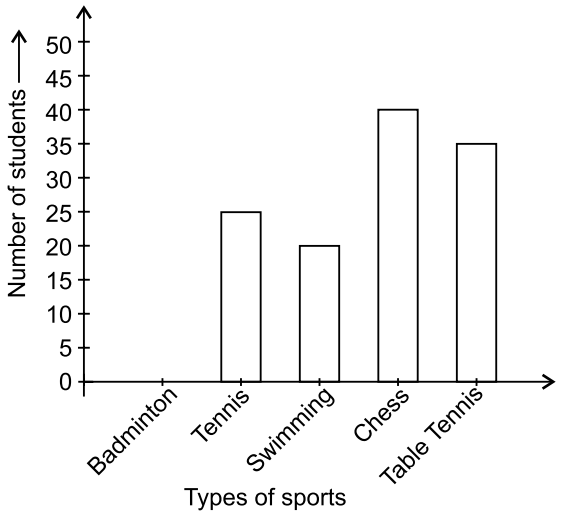
15. The given bar graph shows the types of sports liked by 150 students. Find the number of students who like badminton.

A. 30

B. 50

C. 45

D. Data inadequate



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16. Select the correct match.

A. 7:25 pm – 25 minutes past 7 pm

B. 6:35 am – 35 minutes to 6 pm

C. 19:35 hours – 35 minutes past 8:00 am

D. 20:35 hours – 35 minutes to 8:00 pm

SPACE FOR ROUGH WORK

17. How many hundreds must be added to 1911 to get 28011 ?

A. 261 B. 20000 C. 2000 D. 6100

18. Rinki bought the following items from the market.

How much change did she receive, if she gave the shopkeeper, 2, two thousand rupee notes?

A. ₹ 1275 B. ₹ 2725 C. ₹ 275 D. ₹ 1225

19. What must be subtracted from 26783 to get 2768 ?

A. 26783 B. 2768 C. 20415 D. 24015

20. Form the 5-digit number using given clues.

- My thousand's place digit is the greatest one digit odd number.
- My one's place digit is the first multiple of 5.
- My ten thousand's place digit is factor of every number.
- My hundred's place digit is 4^{th} multiple of 2.
- My ten's place digit is prime number greater than 5 and less than 10.

A. 27895 B. 19875 C. 28795 D. 18957

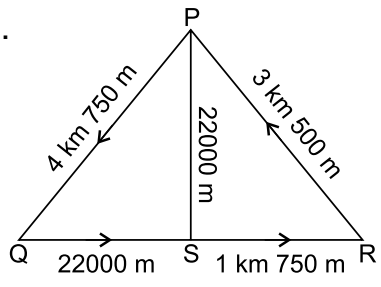
21. The sum of distance from P → Q and Q → R is _____.

A. 18 km 500 m

B. 28 km 500 m

C. 285 km 50 m

D. 185 km 50 m



22. Find the missing number.

136 × 102 = 2 × 6 × 4 × 17 × ___?___

A. 17 B. 16 C. 15 D. 27

23. Multiply 1782 with 56, then rounded off the answer to the nearest thousand.

A. 90000 B. 100000 C. 10000 D. 99000

SPACE FOR ROUGH WORK

24. The given table shows the amount of money spent by 5 friends at a shopping mall.

Amit	Varun	Nitin	Saurabh	Mohit	Total
₹ 14095	₹ 15125	₹ 10225	?	₹ 19755	₹ 79564

Find the amount of money spent by Saurabh.

A. ₹ 15404 B. ₹ 20364 C. ₹ 21334 D. ₹ 10334

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25. The following time was seen on Samarth's and Sidak's watch when the actual time was 2:50 pm.

Find the time shown on Samarth's and Sidak's watch respectively when the actual time will be 16:50 hrs.

A. 4:10 pm, 4:25 pm, B. 4:25 am, 4:10 am

C. 4:05 pm, 4:25 pm D. 4:25 pm, 4:05 am

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26. Select the correct match.

A. 2444 seconds – 146460 minutes B. 14 minutes 8 seconds – 848 minutes

C. 1 hour 20 seconds – 3620 seconds D. 2 hours 13 minutes – 133 seconds

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27. A cup can hold 150 ml of water. How many cups of water are needed to fill the tank of capacity 6 litres ?

A. 40 B. 30 C. 35 D. 45

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28. A red ribbon is 4 m 56 cm long and a blue ribbon is 1 m 200 mm long. What is the total length of both the ribbons?

A. 5 m 56 cm B. 576 cm C. 5060 cm D. 6 m 76 cm

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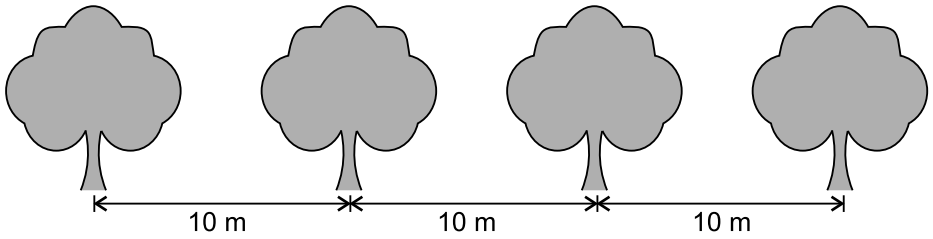
29. 501 trees were planted along a straight road. The distance between two consecutive trees is 10 m. What is the distance between first and 201st tree ?

A. 2 km 200 m

B. 2 km 10 cm

C. 2 km

D. 3 km 100 m



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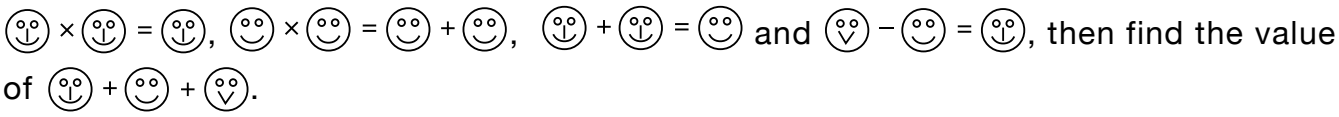
30. Nisha had some toys in her store. She sold 1206 toys in January and 1654 toys in February. After she bought 2669 toys in March, she had 5936 toys altogether. How many toys did she have at first ?

A. 6127 B. 5745 C. 407 D. 5454

SPACE FOR ROUGH WORK

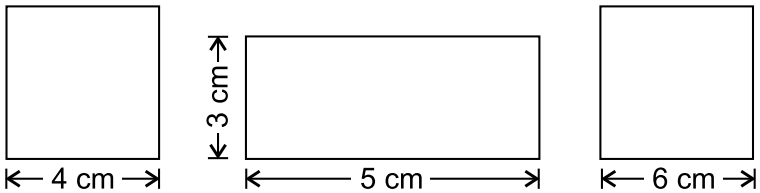
31. If each smiley represents a 1-digit number, and



then find the value of .

A. 7 B. 8 C. 9 D. 6

32. Which of the following statements is CORRECT?



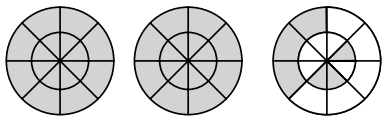
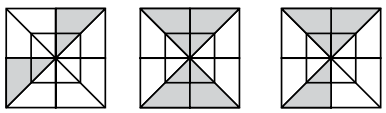
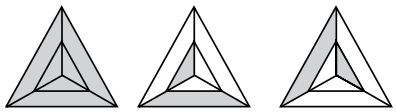
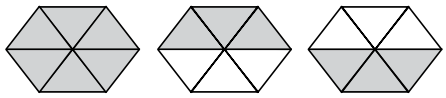
A. Perimeter of square (A) is greater than the perimeter of rectangle.

B. Perimeter of square (B) is equal to the perimeter of rectangle.

C. (Perimeter of square (A) + perimeter of square (B)) is greater than the perimeter of rectangle.

D. (Perimeter of square (A) + perimeter of rectangle) is less than the perimeter of square (B).

33. Match the figures given in column I with their unshaded parts given in column II.

Column I		Column II	
(P)		(i)	$\frac{15}{8}$
(Q)		(ii)	$\frac{5}{8}$
(R)		(iii)	$\frac{6}{6}$
(S)		(iv)	$\frac{4}{3}$

A. (P) – (ii), (Q) – (iii), (R) – (iv), (S) – (i)

B. (P) – (iv), (Q) – (iii), (R) – (ii), (S) – (i)

C. (P) – (ii), (Q) – (i), (R) – (iv), (S) – (iii)

D. (P) – (i), (Q) – (ii), (R) – (iii), (S) – (iv)

SPACE FOR ROUGH WORK

34. Find the value of P, Q, R and P + Q.

$$\begin{array}{r} 335\text{Ⓟ} \\ \times\ 126 \\ \hline \text{Ⓠ}0136 \\ 67120 \\ +\ 335600 \\ \hline 4\text{Ⓡ}2856 \end{array}$$

	P	Q	R	P + Q
A.	6	1	2	7
B.	6	2	2	8
C.	6	2	2	7
D.	6	1	2	8

35. State 'T' for true and 'F' for false.

(i) 8 groups of 8 = 2 less than 66.

(ii) 4 groups of 6 = 8 groups of 3.

(iii) 9 groups of 4 = 2 more than 2 groups of 17.

(iv) 3 groups of 7 = 1 more than 3 groups of 6.

	(i)	(ii)	(iii)	(iv)
A.	T	F	T	F
B.	T	T	T	F
C.	T	T	F	F
D.	F	T	F	T

SPACE FOR ROUGH WORK