

FREE PRACTICE PACK · EDITION 1

Class 6 Mathematics Olympiad practice

16 original questions + explained answers

For students preparing for SOF IMO.

Inside this pack

Eight topic-practice questions and an eight-question, 20-minute mini-mock.

Topics selected for practice

- Integers and factors
- Fractions and algebra
- Geometry and measurement
- Data and reasoning

How to use it

Try the practice first. Complete the mini-mock in one sitting. Check the explanations, mark mistakes, and retry them the next day.

This pack covers selected topics. It is original BodhiScore material, independent of SOF, and is not an official paper or a full-length exam. Check the official syllabus for the complete scope.

Topic practice

Work through these eight questions without a timer. Explain your choice before checking the solutions.

1. Integers and factors

Evaluate $-8 + 15 - 6$.

A. 13

B. -1

C. 1

D. 7

2. Fractions and algebra

What is $\frac{3}{4}$ of 28?

A. 21

B. 24

C. 7

D. 14

3. Geometry and measurement

A rectangle is 13 cm by 8 cm. Find its area.

A. 42 cm^2

B. 104 cm^2

C. 108 cm^2

D. 21 cm^2

4. Data and reasoning

Find the next term: 1, 4, 9, 16, ____.

A. 36

B. 20

C. 24

D. 25

Topic practice (continued)

5. Integers and factors

What is the least common multiple of 6 and 8?

- | | |
|--------------|--------------|
| A. 12 | B. 18 |
| C. 24 | D. 48 |
-

6. Fractions and algebra

Simplify $\frac{5}{6} - \frac{1}{4}$.

- | | |
|--------------------------|--------------------------|
| A. $\frac{1}{2}$ | B. $\frac{7}{12}$ |
| C. $\frac{2}{10}$ | D. $\frac{4}{2}$ |
-

7. Geometry and measurement

A triangle's angles are 48 degrees and 67 degrees. What is the third angle?

- | | |
|-----------------------|----------------------|
| A. 115 degrees | B. 55 degrees |
| C. 65 degrees | D. 75 degrees |
-

8. Data and reasoning

The mean of 6, 10 and 14 is what?

- | | |
|--------------|--------------|
| A. 12 | B. 30 |
| C. 8 | D. 10 |
-

Timed mini-mock

Set a 20-minute timer for these eight questions. Score 1 point per correct answer; there is no penalty for an incorrect answer. This is BodhiScore's practice scoring.

9. Integers and factors

A lift is on floor -2 and rises 7 floors. Which floor does it reach?

- | | |
|--------------|--------------|
| A. -5 | B. 5 |
| C. 9 | D. -9 |
-

10. Fractions and algebra

If $x + 17 = 42$, what is x ?

- | | |
|---------------|--------------|
| A. 29 | B. 59 |
| C. 714 | D. 25 |
-

11. Geometry and measurement

A rectangular field is 20 m long and 9 m wide. What is its perimeter?

- | | |
|-----------------|-----------------|
| A. 58 m | B. 180 m |
| C. 360 m | D. 29 m |
-

Timed mini-mock (continued)

12. Data and reasoning

A bag has 3 red, 5 blue and 2 green counters. What is the probability of picking blue?

- | | |
|------------------|------------------|
| A. $\frac{1}{5}$ | B. $\frac{1}{2}$ |
| C. $\frac{3}{5}$ | D. $\frac{5}{2}$ |
-

13. Integers and factors

Which is a prime number?

- | | |
|-------|-------|
| A. 33 | B. 21 |
| C. 27 | D. 29 |
-

14. Fractions and algebra

A number is multiplied by 3, then 5 is subtracted to give 19. What was the number?

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

Timed mini-mock (continued)

15. Geometry and measurement

A cuboid has length 5 cm, width 3 cm and height 4 cm. What is its volume?

- | | |
|-----------------------------|------------------------------|
| A. 60 cm^3 | B. 120 cm^3 |
| C. 12 cm^3 | D. 47 cm^3 |
-

16. Data and reasoning

Four consecutive integers have sum 50. What is the smallest?

- | | |
|--------------|--------------|
| A. 13 | B. 10 |
| C. 11 | D. 12 |
-

Answers and explanations

Check why the answer works, then retry any question you missed.

1. C - 1

$-8 + 15 = 7$, and $7 - 6 = 1$.

2. A - 21

28 divided by 4 is 7; $7 \times 3 = 21$.

3. B - 104 cm^2

Area equals $13 \times 8 = 104 \text{ cm}^2$.

4. D - 25

These are square numbers 1^2 , 2^2 , 3^2 , 4^2 ; next is $5^2 = 25$.

5. C - 24

24 is the smallest positive number divisible by both 6 and 8.

6. B - $7/12$

Using denominator 12 gives $10/12 - 3/12 = 7/12$.

7. C - 65 degrees

Triangle angles total 180 degrees; $180 - 48 - 67 = 65$.

8. D - 10

$(6 + 10 + 14)$ divided by 3 is 10.

9. B - 5

$-2 + 7 = 5$.

Answers and explanations (continued)

10. D - 25

Subtracting 17 from each side gives $x = 25$.

11. A - 58 m

Perimeter = $2(20 + 9) = 58$ m.

12. B - $\frac{1}{2}$

There are 5 blue among 10 total counters, so probability is $\frac{5}{10} = \frac{1}{2}$.

13. D - 29

29 has no positive divisors besides 1 and itself.

14. A - 8

Add 5 to get 24, then divide by 3: the number is 8.

15. A - 60 cm^3

Volume is length $\times$ width $\times$ height = $5 \times 3 \times 4 = 60 \text{ cm}^3$.

16. C - 11

The four are 11, 12, 13, 14; their sum is 50, so the smallest is 11.

Topic scope checked against SOF syllabus: [SOF IMO Class 6 syllabus](#)