

End-of-year maths quiz for CBSE Class 10: answers

CBSE Math Revision · CBSE Class 10 (Class 9 can try most of it) · Teacher answers and notes

No calculator. Use $\pi = 22/7$ where a question says so.

Teacher notes

- How to run it: teams of three or four with a mini whiteboard. Read each question out (or use 'Play it on the projector' above for a Jeopardy board with team scores). Questions get harder through each round: 1 point for question 1 up to 5 points for question 5, or use the board's 100 to 500.
- Tie-break: every team writes one estimate; the closest wins.

Starter

1. **42**

- $6 \times 7 = 42$

2. **9**

- $9 \times 9 = 81$

Round 1: Real numbers

a. **42**

- $84 = 2^2 \times 3 \times 7$, $126 = 2 \times 3^2 \times 7$
- $\text{HCF} = 2 \times 3 \times 7 = 42$

b. **36**

- $2^2 \times 3^2 = 36$

c. **0.175**

- $7/40 = 175/1000$

d. **20**

- $360 \div 18 = 20$

e. **16**

- It divides 240 and 1024.
- $\text{HCF}(240, 1024) = 16$

Round 2: Algebra

a. **$x = 4$**

- $5x = 20$

b. **4 and 5**

- $(x - 4)(x - 5)$

c. **4**

- $-b/a = 8/2$

d. **$x = 7$, $y = 3$**

- Add: $2x = 14$

e. **$k = 6$**

- $k^2 - 36 = 0$

Round 3: APs and coordinates

a. **79**

- $3 + 19 \times 4 = 79$

b. **210**

- $20 \times 21 \div 2$

c. **10**

- $\sqrt{(36 + 64)} = 10$

d. **(2, 2)**

- $((-2 + 6)/2, (5 - 1)/2)$

e. **The 35th**

- $21 - 3(n - 1) = -81$
- $n - 1 = 34$

Round 4: Trigonometry and mensuration

a. **1**

- $\frac{1}{2} + \frac{1}{2}$

b. **2**

- $1 + 1$

c. **616 cm²**

- $22/7 \times 196 = 616$

d. **30 m**

- $\tan 45^\circ = h/30 = 1$

e. **66 cm³**

- $\frac{1}{3} \times 22/7 \times 9 \times 7 = 66$

Round 5: Statistics and probability

a. **1/2**

- 2, 3, 5: 3 out of 6

b. **1/13**

- $4/52$

c. **8**

- $40 \div 5$

d. **5**

- 5 appears three times.

e. **5/36**

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

Extension

1. **604 800**

- $60 \times 60 \times 24 \times 7 = 604\,800$

Every question is original and every answer was recomputed by computer before publishing.