

Spot the mistake relay and maths taboo 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

- Relay: teams of three. Give each team the first worked solution; when they bring you the mistake and the corrected answer, they get the next one. The first team through all six wins.
- Every slip here is one of the common mistakes on our [Class 10 Examiner Insights page](#), in a new example of our own. Show the page afterwards so students can see which mistakes cost the most marks.
- Taboo cards: one student describes the word without saying it or any of the banned words; their team guesses. The sample clue on each card shows that it can be done.
- Pictionary (no words or numbers allowed on the board, 60 seconds each): parallel, perpendicular, tangent, frustum, angle of elevation, sector, histogram, cylinder.

Starter

1. $x^2 + 6x + 9$

- $(a + b)^2 = a^2 + 2ab + b^2$

2. **33**

- $-2 \times (-3) = +6$, so $27 + 6 = 33$

3. **32**

- $a_n = a + (n - 1)d = 5 + 9 \times 3$

Task A: Relay, part 1

a. **154 cm²**

- Mistake: the diameter was squared instead of the radius.
- $r = 7$: $22/7 \times 49 = 154$

b. **20**

- Mistake: that is the modal class. For the median use $n/2 = 15$ and the cumulative frequencies 12, 15, 22, 30: the median class is 10–20.
- Median = $10 + (15 - 12)/3 \times 10 = 20$

c. **1/2**

- Mistake: those three outcomes are not equally likely.
- HH, HT, TH, TT: two of four have exactly one head, so $P = 1/2$.

Task B: Relay, part 2

a. **$x = 7$ or $x = -2$**

- Mistake: a sign slip at the last step.
- $x - 7 = 0$ gives $x = 7$; $x + 2 = 0$ gives $x = -2$.

b. **650**

- Mistake: the formula uses $(n - 1)d$, not nd .
- $S = 10 \times (8 + 19 \times 3) = 10 \times 65 = 650$

c. **1**

- Mistake: $(1/2)(1/2) = 1/4$, not $1/2$.
- $3/4 + 1/4 = 1$

Task C: Maths taboo

a. **Sample clue: 'Add up all the sides of a shape.'**

- The word is perimeter. Any clue that avoids the banned words is fine.

b. **Sample clue: 'Numbers like 2, 3, 5, 7 and 11.'**

- The word is prime. Any clue that avoids the banned words is fine.

c. **Sample clue: 'Put the data in a row from smallest to largest and pick the value halfway along.'**

- The word is median. Any clue that avoids the banned words is fine.

d. **Sample clue: 'The x-value where the graph of $p(x)$ cuts the x-axis.'**

- The word is zero of a polynomial. Any clue that avoids the banned words is fine.

Extension

1. **$x = 3$ (two equal roots)**

- Mistake: $D = 0$ means two equal real roots; $D < 0$ means no real roots.
- $(x - 3)^2 = 0$, so $x = 3$.

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