Diwali maths activities for Class 9 and Class 10: Class 11: answers

CBSE Math Revision · CBSE Class 11 (no calculator) · Teacher answers and notes

No calculator. Every answer works out exactly.

Teacher notes

- For CBSE Class 11. No calculator: every answer works out exactly, as in board exams.

Starter

1. **3π/4**
   - 135 × π/180 = 3π/4
2. **1**
   - 1/2 + 1/2 = 1
3. **3024**
   - 9 × 8 × 7 × 6 = 3024
4. **420**
   - 20 terms with mean 21: 20 × 21 = 420

Task A: A rangoli circle

a. **(3, 4)**
   - Complete the squares: $(x - 3)^2 + (y - 4)^2 = 25$

b. **5**
   - $\sqrt{25} = 5$

c. **(6, 8)**
   - 0 + 0 − 0 − 0 = 0, so (0, 0) is on the circle.
   - The centre (3, 4) is the midpoint of the diameter, so the other end is (6, 8).

Task B: Festival lights

a. **162**
   - $2 \times 3^4 = 162$

b. **242**
   - $2(3^5 - 1)/(3 - 1) = 243 - 1 = 242$

c. **210**
   - Order matters: ${}^7P_3 = 7 \times 6 \times 5 = 210$

d. **150**
   - ${}^5C_2 \times {}^6C_2 = 10 \times 15 = 150$

Extension

1. **3/2**
   - sin 30° = 1/2, cos 60° = 1/2 and tan 45° = 1.
   - 1/4 + 1/4 + 1 = 3/2

Every question is original and every answer was checked before publishing.