

Holi maths for CBSE Class 9 and 10: answers

CBSE Math Revision · CBSE Class 9 and 10 · Teacher answers and notes

No calculator. Every answer works out exactly.

Teacher notes

- Holi falls on a different date each year: use this pack in the weeks around it.
- All recipes and quantities are made up; no real colour powder is needed.
- Task B (b) is a pair of linear equations in disguise: let students try a guess-and-check table first, then set up the equations.

Starter

1. **2 : 3**

- Divide both by 6.

2. **180 g and 270 g**

- 5 parts: $450 \div 5 = 90$. $2 \times 90 = 180$ and $3 \times 90 = 270$.

3. **90**

- $360 \div 4 = 90$

4. **5**

- 1 packet makes 4 cups, so 20 cups need 5 packets.

Task A: Colour recipes

a. **50 g red, 150 g white**

- 4 parts: $200 \div 4 = 50$. Red 50 g, white 150 g.

b. **100 g**

- 5 parts: $250 \div 5 = 50$. Red = $2 \times 50 = 100$ g.

c. **150 g; 33 $\frac{1}{3}$ %**

- $50 + 100 = 150$ g
- $150/450 \times 100 = 100/3 = 33 \frac{1}{3}\%$

Task B: Mixing two mixtures

a. **A: $\frac{1}{5}$, B: $\frac{3}{5}$**

- A: 1 part out of 5. B: 3 parts out of 5.

b. **125 g of A and 375 g of B**

- Let x g of A and y g of B: $x + y = 500$ and $x/5 + 3y/5 = 250$.
- The second gives $x + 3y = 1250$. Subtract the first: $2y = 750$, so $y = 375$ and $x = 125$.

c. **36%**

- Red: $300/5 + 3 \times 200/5 = 60 + 120 = 180$ g.
- $180/500 \times 100 = 36\%$

Task C: Water balloons

a. **60 litres**

- $50 \times 40 \times 30 = 60\,000 \text{ cm}^3 = 60 \text{ litres}$

b. **240**

- $60\,000 \div 250 = 240$

c. **$\frac{1}{2}$**

- 10 of the 20 packets are not yellow: $10/20 = \frac{1}{2}$.

Extension

1. **200 g**

- 400 g of pink has 100 g red and 300 g white.
- For 1 : 1 the red must be 300 g, so add 200 g.

2. **20 g red and 50 g blue**

- Red $2k$, blue $5k$. $2k + 30 = 5k$, so $k = 10$.

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