Solutions

Award method and answer marks as indicated; accept equivalent correct methods.

2.1

- $Q = -8 + 5 = \mathbf{-3}$; two negative factors give $P = \mathbf{12}$.

2.2

- Brackets first: $Q = 18 - 2(7) = 18 - 14 = \mathbf{4}$.

2.3

- Use denominator 12: $Q = 10/12 - 3/12 = \mathbf{7/12}$.

2.4

- Multiply and divide first: $Q = 1.2 + 0.6 = \mathbf{1.8}$.

3.1

(a)

- $T = -7 + 12 = \mathbf{5}^\circ\text{C}$.

(b)

- $T = 5 - 8 = \mathbf{-3}^\circ\text{C}$.

(c)

- $F = (3/4)(5/2) = 15/8 = \mathbf{1\frac{7}{8}}$ kg.

3.2

(a)

- Use $N = \text{total/per cake}$.
- $N = (9/2) \div (3/8) = (9/2)(8/3) = \mathbf{12}$.
- There is no fraction of a cake or flour left at this maximum.

(b)

- Flour left after ten cakes: $m = 9/2 - 10(3/8) = 3/4$ kg.
- New flour $m_n = 3/4 + 3/4 = \mathbf{3/2}$ kg.
- Further cakes $N = (3/2) \div (3/8) = \mathbf{4}$.

3.3

- Brackets first, then $\times$ and $\div$ before $-$: $8 \times 2 = 16$ and $12 \div 4 = 3$.
- $16 - 3 = \mathbf{13}$.

3.4

(a)

- $(\mathbf{6 + 4}) \times 3 - 1 = 30 - 1 = 29$.

(b)

- Improper fractions over a common denominator: $\frac{11}{4} - \frac{11}{6} = \frac{33}{12} - \frac{22}{12}$; this gives $\mathbf{\frac{11}{12}}$.