Solutions

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

2.1

- $Q = 4(3) + 7 = \mathbf{19}$.

2.2

- $Q = (-5)^2 + 6 = 25 + 6 = \mathbf{31}$.

2.3

- $Q = (8 - 2)/3 = 6/3 = \mathbf{2}$.

2.4

- Double first then subtract 5: $2n - 5$.

3.1

(a)

- Fixed cost plus hourly cost: $C = 40 + 12h$.

(b)

- $C = 40 + 12(3.5) = \mathbf{82}$ yuan.

(c)

- The fixed 40 yuan is charged once. One hour costs 52 yuan, but two cost $C = 40+24 = 64$, **not 104 yuan**.

3.2

(a)

- Fixed plus variable cost gives $C = \mathbf{25} + \mathbf{4n}$.
- At $n = 7$, $C = 25 + 4(7)$, so $C = \mathbf{53}$ yuan.

(b)

- Two orders: $T = (25 + 4(3)) + (25 + 4(4))$, giving $T = \mathbf{78}$ yuan.
- The extra **25 yuan** is a second fixed charge, not an extra parcel charge.

3.3

- Substitute: $3 \times 4 - 2 \times (-5) = 12 + 10$.
- **22**.

3.4

(a)

- Collect like terms: $5x - 2x = 3x$ and $3y + 4y = 7y$.
- $\mathbf{3x + 7y}$.

(b)

- Multiply the numbers, then the letters: $\mathbf{12pq}$.