1. $\frac{1}{2}$ of $\frac{1}{3} = \frac{1}{2} \times \frac{1}{3} = \frac{1}{6}$, hence (D).

2. $x + 45 + 105 + 125 = 360$, so $x = 360 - 275 = 85$, hence (C).

3. The four payments total $4 \times 65 = 260$. Hence the amount saved is $260 - 249 = 11$, hence (A).

4. The total area $A$ is given by

$$A = \text{area of all 5 circles} - \text{area of the overlap}$$
$$= 5 - \left(4 \times \frac{1}{8}\right)$$
$$= 5 - \frac{1}{2} = 4\frac{1}{2},$$

hence (B).

5. If one side is twice the other, the perimeter is equivalent to 6 times the shorter side, so the shorter side is $\frac{24}{6} = 4$ cm and the longer side is then $8$ cm. Thus the area, in square centimetres, is $8 \times 4 = 32$, hence (E).
6. Volume of the carton is given by \( V = s^2h \), where \( s \) is the length of the square base and \( h \) is the height. 1L = 1000 mL = 1000 cubic centimetres. Thus

\[
7 \times 7 \times h = 1000 \\
\frac{1000}{49} = 20,
\]

hence (B).

7. The minimum score \( x \) can be gained by one student when each of the other nine students achieve the maximum score, i.e have a combined score of 900. Then, for this score \( x \),

\[
\frac{900 + x}{10} = 92,
\]

and \( x = 20 \),

hence (A).

8. The area of the square is \( 5 \times 5 = 25 \) square units.

Counting the shaded right-angled triangles (each half a square), we get a total of 20, which have an area of 10 square units.

Thus, as a fraction of the square, the portion shaded is \( \frac{10}{25} = 0.4 \),

hence (B).

9. Let the number of large bags be \( x \). Then the number of small bags is \( 46 - x \), and

\[
20x + 8(46 - x) = 560 \\
20x + 368 - 8x = 560 \\
12x = 192 \\
x = 16,
\]

hence (B).

10. The total number of edges on all the faces is

\[
(20 \times 3) + (30 \times 4) + (12 \times 5) = 240,
\]

but this counts each edge twice, as it occurs on exactly two adjacent faces.

Hence the number of edges is 120,

hence (B).