SUMMATIVE ASSESSMENT 1

Standard: VI | Subject: Mathematics (E 603) | Answer Key
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Question 1

a. **B. Statements (i) and (iii) are correct.**
(The quadrilateral contains one right angle, two acute angles < 90°, and one obtuse angle > 90°.)

b. **Approximately 125° to 130°** (Bottom-right obtuse angle).

c. **Construction Steps:**

1. Draw a horizontal base segment of length **10 cm**; mark a center point at **5 cm**.
2. **Left Triangle:** At the 0 cm and 5 cm points, construct **60°** angles inwards to intersect.
3. **Right Triangle:** At the 5 cm and 10 cm points, construct **45°** angles inwards to intersect.

Question 2 (Attempt 2.A or 2.B)

Option 2.A:

a. Draw the regular 6-pointed star / hexagon pattern and shade as specified.

b. **B. 360° ÷ 6** (which is 60°).

OR

Option 2.B:

a. **B. $^{3}/_{10}$ part of the circle is shaded.** [Fraction = 108° ÷ 360° = $^{3}/_{10}$]

b. **Construction:** Calculate angle = $^{4}/_{9}$ × 360° = **160°**. Draw a circle and construct a central sector of 160°, then shade it.

Question 3

a. **2 $^{1}/_{4}$ apples** (9 pieces ÷ 4 = $^{9}/_{4}$)

b. **13 pieces** (3 $^{1}/_{4}$ × 4 = $^{13}/_{4}$ × 4 = 13)

c. **5 $^{1}/_{2}$ apples** (2 $^{1}/_{4}$ + 3 $^{1}/_{4}$ = 5 $^{2}/_{4}$ = 5 $^{1}/_{2}$ apples)

d. **C. 2 $^{4}/_{5}$**

Question 4 (Attempt 4.A or 4.B)

Option 4.A:

a. **C. Statements 1 and 2 are correct.**

b. **$^{7}/_{14}$ and $^{2}/_{14}$**

c. **16 cm** (96 cm ÷ 6 = 16 cm)

OR

Option 4.B:

a. **D. a - 2, b - 3, c - 1**

b. Simplest form: (i) $^{42}/_{72}$ = **$^{7}/_{12}$** | (ii) $^{18}/_{81}$ = **$^{2}/_{9}$**

c. Each bottle: 30 ÷ 9 = **$^{10}/_{3}$ litres (or 3 $^{1}/_{3}$ L)** | 3 bottles: 3 × $^{10}/_{3}$ = **10 litres**

Question 5

a. Number of small cubes = 5 × 3 × 3 = **45 cubes**

b. Volume of one small cube = 2 × 2 × 2 = **8 cm^3**

c. Volume of the large block = 45 × 8 = **360 cm^3**

d. Height of the water tank:

Volume = 12000 L = 12 m^3

Height = Volume ÷ (Length × Width) = 12 ÷ (2 × 2) = 12 ÷ 4 = **3 metres**

Question 6

a. Capacity of aquarium = 80 × 20 × 25 = **40,000 cm^3 (or 40 litres)**

b. Volume of the cube = 10 × 10 × 10 = **1,000 cm^3 (or 1 litre)**

c. Litres of water in the aquarium:

40,000 cm^3 − 1,000 cm^3 = 39,000 cm^3

In litres = 39,000 ÷ 1,000 = **39 litres**