

Question 14

$$\frac{\sqrt{3}}{2\sqrt{4}}$$

$$\frac{\sqrt{3}}{2\sqrt{4}} \quad \sqrt{4} = 2$$

$$\sqrt{4}$$

Factor the numbers: $4 = 2^2$
 $= \sqrt{2^2}$

Apply radical rule: $\sqrt{a^n} = a$
 $\sqrt{2^2} = 2$

$$= \frac{\sqrt{3}}{2 \times 2}$$

Multiply the numbers: $2 \times 2 = 4$

$$= \frac{\sqrt{3}}{4}$$

$$\left(\frac{\sqrt{3}}{4} \right)$$

QUESTION 15

$$\frac{3\sqrt{2}}{4\sqrt{5}}$$

multiply by the conjugate $\frac{\sqrt{5}}{\sqrt{5}}$

$$= \frac{3\sqrt{2}\sqrt{5}}{4\sqrt{5}\sqrt{5}}$$

$$3\sqrt{2}\sqrt{5} = 3\sqrt{10}$$

Apply radical rule: $\sqrt{a}\sqrt{b} = \sqrt{ab}$

$$\sqrt{2}\sqrt{5} = \sqrt{2 \times 5}$$

$$= 3\sqrt{2 \times 5}$$

$$= 3\sqrt{10}$$

$$4\sqrt{5}\sqrt{5} = 20$$

Apply radical rule: $\sqrt{a}\sqrt{a} = a$

$$\sqrt{5}\sqrt{5} = 5$$

$$= 4 \times 5$$

Multiply the numbers: $4 \times 5 = 20$

$$\left(\frac{3\sqrt{10}}{20} \right)$$