1.1

(Q6b) $\frac{2\sqrt{6}}{2\sqrt{27}-\sqrt{8}} \times \frac{2\sqrt{27}+\sqrt{8}}{2\sqrt{27}+\sqrt{8}}$

$= \frac{4\sqrt{162}+2\sqrt{48}}{4(27)-8}$

$= \frac{36\sqrt{2}+8\sqrt{3}}{100}$

$= \frac{9\sqrt{2}+2\sqrt{3}}{25}$

(Q6b) $\frac{3\sqrt{2}+2\sqrt{3}}{\sqrt{12}-\sqrt{8}} \times \frac{\sqrt{12}+\sqrt{8}}{\sqrt{12}+\sqrt{8}}$

$= \frac{3\sqrt{24}+3\sqrt{16}+2\sqrt{36}+2\sqrt{24}}{12-8}$

$= \frac{5\sqrt{24}+12+12}{4}$

$= \frac{10\sqrt{6}+24}{4}$

$= \frac{5\sqrt{6}+12}{2}$

(Q7a)

FACTOR

$$\frac{\sqrt{a}-2}{a-4}$$

$$= \frac{\sqrt{a}-2}{(\sqrt{a}-2)(\sqrt{a}+2)}$$

$$= \frac{1}{\sqrt{a}+2}$$

REGULAR

$$\frac{\sqrt{a}-2}{a-4} \cdot \frac{\sqrt{a}+2}{\sqrt{a}+2}$$

$$= \frac{a-4}{(a-4)(\sqrt{a}+2)}$$

$$= \frac{1}{\sqrt{a}+2}$$

(Q7b)

$$\frac{\sqrt{x+4}-2}{x} \cdot \frac{\sqrt{x+4}+2}{\sqrt{x+4}+2}$$

$$= \frac{(x+4)-4}{x(\sqrt{x+4}+2)}$$

$$= \frac{1}{\sqrt{x+4}+2}$$