

Indices h/wrk.

$$\text{Q1. } \frac{a^{1/2} \times a^{5/2}}{a^2} = \frac{a^{6/2}}{a^2} = \frac{a^3}{a^2} = a^{3-2} = \underline{\underline{a}}$$

$$\text{Q2. } \frac{3a^2 \times 2a}{a^2} = \frac{6a^3}{a^2} = 6a^{3-2} = \underline{\underline{6a}}$$

$$\text{Q3. } 6x^{3/2} \div 2x^{1/2} = 3x^{3/2-1/2} = 3x^{2/2} = \underline{\underline{3x}}$$

$$\begin{aligned} \text{Q4. } & a^{2/3} (a^{2/3} - a^{-2/3}) \\ &= a^{2/3} \times a^{2/3} - a^{2/3} \times a^{-2/3} \\ &= a^{4/3} - a^0 \\ &= \underline{\underline{a^{4/3} - 1}} \end{aligned}$$

$$\text{Q5. } m^5 \times m^{-8} = m^{5+(-8)} = m^{-3} = \underline{\underline{\frac{1}{m^3}}}$$

Q6. $a^2 (2a^{-1/2} + a)$

$$\stackrel{(2)}{=} a^2 \times 2a^{-1/2} + a^2 \times a$$

$$= 2a^{4/2 - 1/2} + a^3$$

$$= 2a^{3/2} + a^3$$

Q7. $k^8 \times (k^2)^{-3}$

$$= k^8 \times k^{-6}$$

$$= k^{8 + (-6)}$$

$$= \underline{\underline{k^2}}$$

Q8. $(16)^{3/4}$

$$= \sqrt[4]{16^3}$$

$$= 8$$

Q9. $\frac{m^1}{m^3} = m^{1-3} = m^{-2}$

$$= \underline{\underline{\frac{1}{m^2}}}$$