1. Express √32 + 3√2 - 3√8, leaving your answer as a surd in its simplest form.

2. Rationalise the denominator: $\frac{3}{\sqrt{12}}$

3. Expand and fully simplify √10(2√5 - 3√10)

4. Find the length of the diagonal AC of the rectangle below, leaving your answer as a surd in its simplest form.
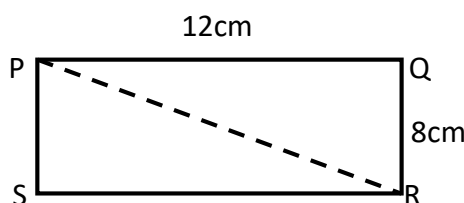
5. Simplify $\sqrt{\frac{5}{30}}$, leaving your answer as a surd with a rational denominator.

6. Simplify √6 x 2√3 x 2√5.

7. Express $\frac{4}{\sqrt{12}}$ with a rational denominator in its simplest form.

8. Simplify $\frac{\sqrt{6}}{\sqrt{18}}$, giving your answer with a rational denominator.

9. Express 5√10 + 5√90 - 3√40 in its simplest form.

10. Find the length of AB below, leaving your answer as a surd in its simplest form.
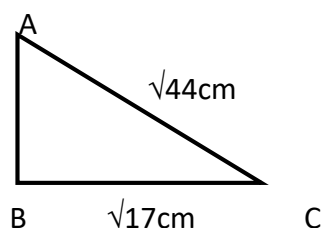
11. Expand and simplify 2√3(2√3 + 5√5)

12. Express √20 + 6√5 - √45 in the form $x\sqrt{a}$ and state the values of x and a.