In these questions we will be given a formula and asked to express one of the letters in terms of the others.

To do this we must

- Identify the letter and set about isolating it.
- Firstly, remove any roots present by squaring or cubing etc.
- Cross multiply if the formula contains a fraction. This will make the formula linear. All equations must be linear before any moving of terms takes place.
- If the letter to be expressed is in more than one term, bring the terms containing the letter to the same side.
- If the letter is common to two or more terms, take out the letter as a common factor and place the other factor into a bracket.
- Bring the other factor, which is now in brackets, to the other side and divide by it.
- If the letter to be expressed is left in squared or cubed form, then get the square or cubed root of both sides to finish.

EXAMPLE: If $\sqrt[3]{\frac{ax^2}{1-r}} = y$, express x in terms of y, a and r.

Following the above guidelines we get:

$$\frac{ax^2}{1-r} = y^3 \Rightarrow ax^2 = y^3(1-r) \Rightarrow x^2 = \frac{y^3(1-r)}{a} \Rightarrow x = \sqrt{\frac{y^3(1-r)}{a}}$$