Algebra 14: Manipulation of Formula

- Tips for students
- Whatever operation we perform on one side of the equation we must carry out the same operation on the other side of the equation

Questions for class

Example 1

$$\frac{1}{z} - \frac{x}{2y} = x$$

1. Make "z" the subject of the equation
2. Make "x" the subject of the equation

Question 1
In each case make the letter in brackets the subject of the equation:

1. $A = 2br - 6r \qquad (r)$
2. $w + 9bx = u(b + 1) \qquad (b)$
3. $m = \frac{w}{4} + \frac{f}{7u} \qquad (f)$
4. $\sqrt[3]{dg - e} = 2g - e \qquad (d)$

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$$V = \tfrac{1}{3}\pi r^2 h$$

Question 2
$x = \sqrt{a} + \frac{1}{\sqrt{a}}$ and $y = \sqrt{a} - \frac{1}{\sqrt{a}}$ where $a > 0$

Find the value of:

$$\sqrt{x^2 - y^2}$$

Question 3
Make "r" the subject of the equation:

$$z = \sqrt{\frac{kr^3}{1 - m}}$$