

Rationalising the denominator:

Examples:

1.  $\frac{3}{\sqrt{2}}$

2.  $\frac{6}{\sqrt{3}}$

3.  $\frac{7}{\sqrt{7}}$

4.  $\frac{15}{\sqrt{5}} + \sqrt{5}$

Test your understanding:

$$\frac{12}{\sqrt{3}}$$

$$\frac{2}{\sqrt{6}}$$

$$\frac{4\sqrt{2}}{\sqrt{8}}$$

More Complicated Examples:

1.  $\frac{3}{\sqrt{6}-2}$

2.  $\frac{4}{\sqrt{3}+1}$

3.  $\frac{3\sqrt{2}+4}{5\sqrt{2}-7}$

Test Your Understanding: Rationalise the denominator and simplify

1.  $\frac{4}{\sqrt{5}-2}$

2.  $\frac{2\sqrt{3}-1}{3\sqrt{3}+1}$

3. Solve  $y(\sqrt{3}-1) = 8$

Give your answer in the form  $a + b\sqrt{3}$  where  $a$  and  $b$  are integers.