hegartymaths

Rationalising surds (1)

Getting ready for A-Level Maths...

*"The most important investment you can make is in **yourself**."*

Rationalising surds (1)

Making life simpler...

$$\frac{8}{0.1}$$

Rationalising surds (1)

Making life simpler...

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

Rationalising surds (1)

My turn

Rationalise $\frac{1}{\sqrt{2}}$

Your turn

Rationalise $\frac{1}{\sqrt{7}}$

Rationalising surds (1)

My turn

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

Give your answer in the form $a\sqrt{b}$ where b is prime and state a and b.

Your turn

Rationalise $\frac{21}{\sqrt{7}}$

Give your answer in the form $a\sqrt{b}$ where b is prime and state a and b.

Rationalising surds (1)

My turn

Rationalise $\frac{15}{2\sqrt{5}}$

Give your answer in the form $a\sqrt{b}$ where a is in simplest form and b is prime. State a and b.

Your turn

Rationalise $\frac{14}{5\sqrt{7}}$

Give your answer in the form $a\sqrt{b}$ where a is in simplest form and b is prime. State a and b.

Rationalising surds (1)

My turn

Simplify the following, giving your answer in the form $a\sqrt{b}$. State a and b.

$$\frac{\sqrt{54}}{3} + \frac{12}{\sqrt{6}}$$

Your turn

Simplify the following, giving your answer in the form $a\sqrt{b}$. State a and b.

$$\frac{\sqrt{63}}{3} + \frac{21}{\sqrt{7}}$$

Rationalising surds (1)

My turn

A rectangle has an area of 60 cm^2 and a width of $\sqrt{12}$ *cm.* Find the length and state your answer in the form $a\sqrt{b}$ where b is prime.

Your turn

A rectangle has an area of 64 cm^2 and a width of $\sqrt{32}$ *cm.* Find the length and state your answer in the form $a\sqrt{b}$ where b is prime.

Rationalising surds (1)

Review Exercise

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

2. Rationalise $\frac{35}{\sqrt{5}}$. Give your answer in the form $a\sqrt{b}$ where b is prime and state a and b.

3. Rationalise $\frac{30}{4\sqrt{3}}$. Give your answer in the form $a\sqrt{b}$ where a is in simplest form and b is prime. State a and b.

4. Simplify the following, giving your answer in the form $a\sqrt{b}$. State a and b. $\frac{\sqrt{50}}{5} + \frac{26}{\sqrt{2}}$

5. A rectangle has an area of 80 cm^2 and a width of $\sqrt{20}$ cm. Find the length and state your answer in the form $a\sqrt{b}$ where b is prime.

Rationalising surds (1)

Review Exercise (Answers)

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

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

2. Rationalise $\frac{35}{\sqrt{5}}$. Give your answer in the form $a\sqrt{b}$ where b is prime and state a and b.

   $7\sqrt{5}$

   $a=7$, $b=5$

3. Rationalise $\frac{30}{4\sqrt{3}}$. Give your answer in the form $a\sqrt{b}$ where a is in simplest form and b is prime. State a and b.

   $\frac{5}{2}\sqrt{3}$

   $a=\frac{5}{2}$, $b=3$

4. Simplify the following, giving your answer in the form $a\sqrt{b}$. State a and b. $\frac{\sqrt{50}}{5}+\frac{26}{\sqrt{2}}$

   $14\sqrt{2}$

   $a=14$, $b=2$

5. A rectangle has an area of 80 cm^2 and a width of $\sqrt{20}$ cm. Find the length and state your answer in the form $a\sqrt{b}$ where b is prime.

   $8\sqrt{5}$