

Harder Surds

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1) Harder Surds: Easier

1) Express

$$\frac{-(2 + 4\sqrt{3})(2 - 4\sqrt{3})}{\sqrt{48}}$$

as $a\sqrt{3}$. Find a .

(3 Marks)

2) Find n where,

$$\sqrt{8} \times \sqrt{32} = 2^n$$

(3 Marks)

1) Harder Surds: Medium

3) Show $\frac{4+\sqrt{2}}{6+\sqrt{8}}$ can be written as $\frac{10-\sqrt{2}}{14}$

(3 Marks)

4) Work out the value of $\frac{3}{\sqrt{3}} + \sqrt{18\frac{3}{4}}$

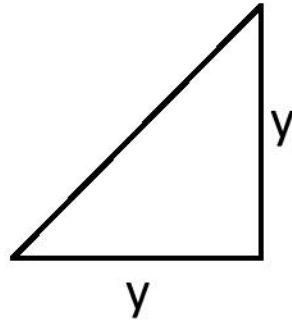
Give you answer in the form $k\sqrt{3}$

(3 Marks)

1) Harder Surds: Harder

Q5. Amir creates a square. It has a length, y , which is a whole number.

Amir cuts the square in half along the diagonal to produce a right angled triangle.



Amir is about to work out the hypotenuse of the triangle.

Amir says "The hypotenuse of the triangle could be a whole number".

Prove that Amir is wrong.

(4 Marks)