SQA Past paper questions

2024 - Paper 1 - Question 6

Simplify $\sqrt{75}-\sqrt{3}$. 2

Click here for video solution.

2023 - Paper 1 - Question 8

Express $\frac{12}{\sqrt{15}}$ with a rational denominator.

Give your answer in its simplest form. 2

Click here for video solution.

2022 - Paper 1 - Question 13

Expand and simplify $\sqrt{10}\left(\sqrt{10}-\sqrt{2}\right)+8\sqrt{5}$. 3

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2021 - Paper 1 - Question 9

Express $\sqrt{50}+\sqrt{45}-\sqrt{2}$ in its simplest form. 3

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2019 - Paper 1 - Question 12

Express $\frac{\sqrt{2}}{\sqrt{40}}$ as a fraction with a rational denominator.

Give your answer in its simplest form. 3

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2018 - Paper 1 - Question 11

Express $\frac{9}{\sqrt{6}}$ with a rational denominator.

Give your answer in its simplest form. 2

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2016 - Paper 1 - Question 9

The function $f(x)$ is defined by $f(x)=\frac{2}{\sqrt{x}}, \quad x>0.$

Express $f(5)$ as a fraction with a rational denominator. 2

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2015 - Paper 1 - Question 13

Express $\frac{4}{\sqrt{8}}$ with a rational denominator.

Give your answer in its simplest form. 3

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2014 - Paper 1 - Question 8

Express $\sqrt{40}+4\sqrt{10}+\sqrt{90}$ as a surd in its simplest form. 3

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Specimen - Paper 1 - Question 5

Express $\frac{4}{\sqrt{6}}$ with a rational denominator in its simplest form. **2**

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2012 - Paper 1 - Question 10

Simplify $\sqrt{2}\left(\sqrt{3}+\sqrt{2}\right)-\sqrt{6}$. **2**

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2011 - Paper 1 - Question 4

Three of the following have the same value.

$$2\sqrt{6}, \quad \sqrt{2}\times\sqrt{12}, \quad 3\sqrt{8}, \quad \sqrt{24}.$$

Which one has a different value?

You must give a reason for your answer. **2**

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2010 - Paper 2 - Question 8

Express

$$\sqrt{63}+\sqrt{28}-\sqrt{7}$$

as a surd in its simplest form. **3**

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2009 - Paper 2 - Question 11

Express $\frac{12}{\sqrt{2}}$ with a rational denominator.

Give your answer in its simplest form. **2**

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2008 - Paper 1 - Question 7

Express

$$2\sqrt{5}+\sqrt{20}-\sqrt{45}$$

as a surd in its simplest form. **3**

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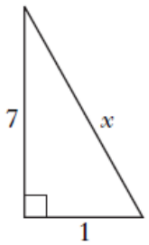
2007 - Paper 1 - Question 9

A right-angled triangle is shown below.



Using Pythagoras' Theorem, find x.
Express your answer as a surd in its simplest form. **3**

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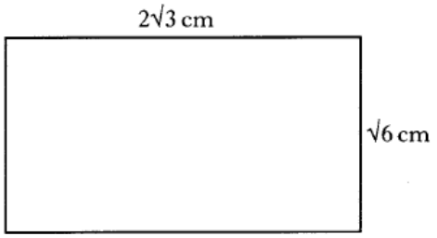
2006 - Paper 1 - Question 10



The rectangle above has length $2\sqrt{3}$ centimetres and breadth $\sqrt{6}$ centimetres.
Calculate the area of the rectangle.
Express your answer as a surd in its simplest form. **3**

Click here for video solution.

2005 - Paper 2 - Question 10

Express $\frac{7}{\sqrt{2}}$ as a fraction with a rational denominator. **2**

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2004 - Paper 1 - Question 6

Express $\sqrt{12}+5\sqrt{3}-\sqrt{27}$ as a surd in its simplest form. **3**

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2003 - Paper 1 - Question 6

Express $\frac{\sqrt{40}}{\sqrt{2}}$ as a surd in its simplest form. **2**

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2002 - Paper 1 - Question 7

Express $\sqrt{45}-2\sqrt{5}$ as a surd in its simplest form. **2**

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2001 - Paper 1 - Question 8

Express $\sqrt{18}-\sqrt{2}+\sqrt{72}$ as a surd in its simplest form. **3**

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2000 - Paper 1 - Question 8

Express $\frac{2}{\sqrt{3}}$ as a fraction with a rational denominator. **2**

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