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GCSE Exam Questions

Simplifying Surds | Number

GCSE Exam Questions: Simplifying surds

1) Simplify $\sqrt{50}$

(2 marks)

2) Simplify $\sqrt{60}$

(2 marks)

3) Simplify $\sqrt{63}$

(2 marks)

4) Simplify $\sqrt{128}$

(2 marks)

5) Show that $\sqrt{6048}$ can be written in the form $k\sqrt{42}$, where k is an integer to be found.

(2 marks)

6) Show that $\sqrt{504}$ can be written in the form $6\sqrt{k}$, where k is an integer to be found.

(2 marks)

7) Simplify fully $5\sqrt{88}$

(2 marks)

8) Simplify fully $4\sqrt{54}$

(2 marks)

GCSE Exam Questions: Simplifying surds Answers

	Question	Answer	Marks
1)	Simplify $\sqrt{50}$	$k\sqrt{2}$ *or* $5\sqrt{2}$ $5\sqrt{2}$	**(1)** **(1)**
2)	Simplify $\sqrt{60}$	$k\sqrt{15}$ *or* $2\sqrt{k}$ $2\sqrt{15}$	**(1)** **(1)**
3)	Simplify $\sqrt{63}$	$k\sqrt{7}$ *or* $3\sqrt{k}$ $3\sqrt{7}$	**(1)** **(1)**
4)	Simplify $\sqrt{128}$	$k\sqrt{2}$ *or* $8\sqrt{k}$ $8\sqrt{2}$	**(1)** **(1)**
5)	Show that $\sqrt{6048}$ can be written in the form $k\sqrt{42}$, where k is an integer to be found.	$6048 = 42 \times 144$ *or* 144 *seen* $12\sqrt{42}$ *or* $k = 12$	**(1)** **(1)**
6)	Show that $\sqrt{504}$ can be written in the form $6\sqrt{k}$, where k is an integer to be found.	$504 = 36 \times 14$ *or* 36 *seen* $6\sqrt{14}$ *or* $k = 14$	**(1)** **(1)**
7)	Simplify fully $5\sqrt{88}$	$k\sqrt{22}$ *or* $10\sqrt{k}$ $10\sqrt{22}$	**(1)** **(1)**
8)	Simplify fully $4\sqrt{54}$	$k\sqrt{6}$ *or* $12\sqrt{k}$ $12\sqrt{6}$	**(1)** **(1)**

Where to go next?

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