1.15 Roots, Powers and Exact Values: 10-minute Pack

Calculators not allowed · about 10 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Evaluate the powers exactly.

(a) 2^5 **(1)**

(b) 5^3 **(1)**

2 Work out $\sqrt{2} \times \sqrt{8}$ and give the answer in exact form.

(2)

3 Simplify and combine: $\sqrt{20} + \sqrt{5}$. Give the exact form.

(2)

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4 Give the positive square root of 49.

(1)

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5 The cube root of 167 lies between two consecutive whole numbers. Write down the two numbers.

(2)

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Mark scheme · 1.15 Roots, Powers and Exact Values: 10-minute Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

(a) 32 cao	**B1**
(a) Answer: **32**	
(b) 125 cao	**B1**
(b) Answer: **125**	

Question 2

use property $\sqrt{a} \times \sqrt{b} = \sqrt{ab}$ or simplify $\sqrt{8}$	**M1**
4 cao	**A1**
Answer: **4**	

Question 3

simplify $\sqrt{20}$ to $2\sqrt{5}$ or show common surd factor	**M1**
$3\sqrt{5}$ cao	**A1**
Answer: **$3\sqrt{5}$**	

Question 4

7 cao	**B1**
Answer: **7**	

Question 5

$5^3 = 125$ or $6^3 = 216$ seen	**M1**
5 and 6 cao	**A1**
Answer: **5 and 6**	

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