1.1 Higher Surds: Simplifying, Multiplying and Dividing: 10-minute Pack

AQA 8365 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Simplify each surd fully, giving your answer in the form $k\sqrt{n}$ where n has no square factors.

(a) $\sqrt{98}$ **(1)**

(b) $\sqrt{180}$ **(1)**

(c) $\sqrt{300}$ **(1)**

(Total for Question 1 is 3 marks)

2 Expand and simplify each expression.

(a) $\sqrt{2}(3 + \sqrt{2})$ **(2)**

(b) $(\sqrt{3} + 1)(\sqrt{3} - 1)$ **(2)**

(c) $(2 + \sqrt{5})(2 - \sqrt{5})$ **(2)**

(Total for Question 2 is 6 marks)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 1.1 Higher Surds: Simplifying, Multiplying and Dividing: 10-minute Pack

Question 1

(a) $7\sqrt{2}$ cao **B1**

(a) Answer: $7\sqrt{2}$

(b) $6\sqrt{5}$ cao **B1**

(b) Answer: $6\sqrt{5}$

(c) $10\sqrt{3}$ cao **B1**

(c) Answer: $10\sqrt{3}$

Question 2

(a) $3\sqrt{2}$ + 2 oe (unsimplified expansion) **M1**

(a) $3\sqrt{2}$ + 2 cao **A1**

(a) Answer: $3\sqrt{2}$ + 2

(b) 3 - 1 oe (difference of two squares used) **M1**

(b) 2 cao **A1**

(b) Answer: 2

(c) 4 - 5 oe **M1**

(c) -1 cao **A1**

(c) Answer: -1

© Revision Library | revisionlibrary.co.uk