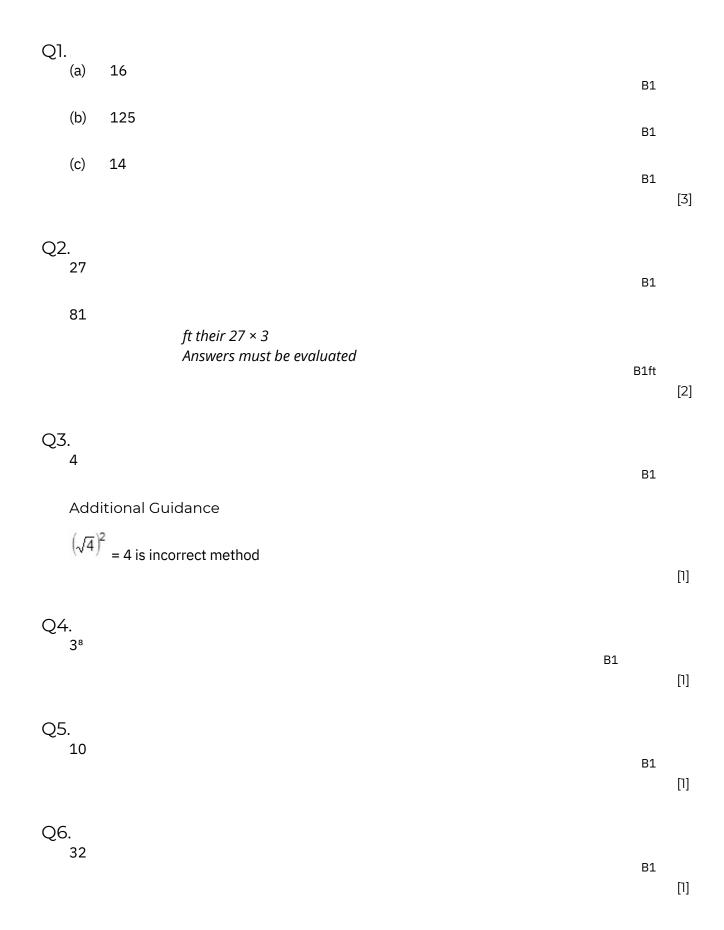
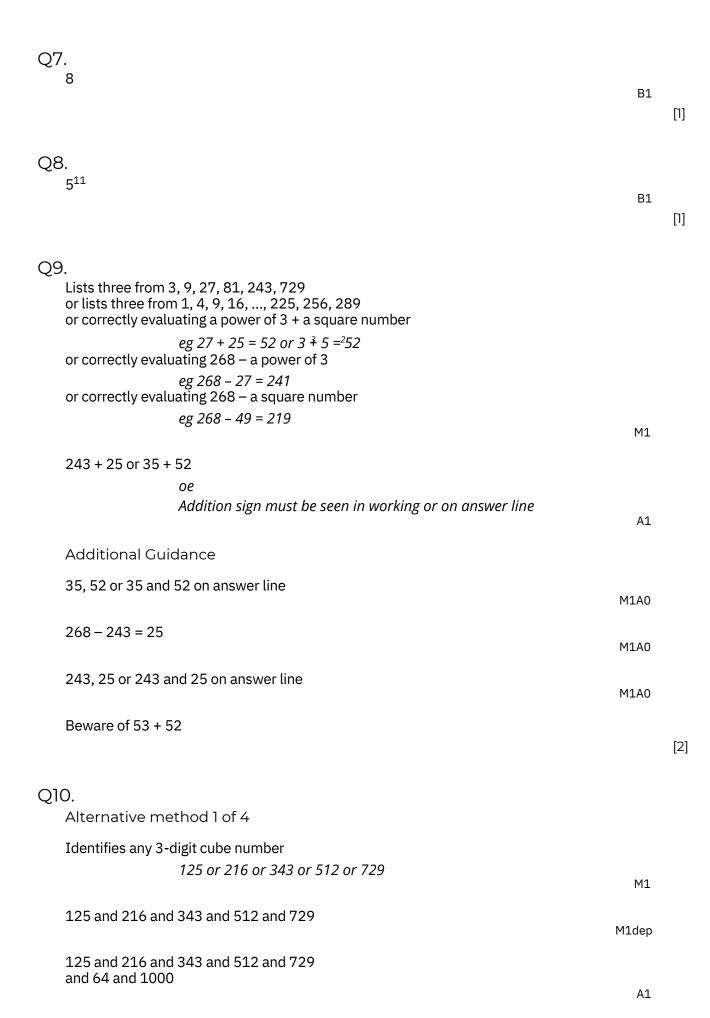
Mark schemes





Alternative method 2 of 4

Identifies any 3-digit cube number

125 or 216 or 343 or 512 or 729

M1

53 = 125 and 93 = 729 and 5, 6, 7, 8, 9 or 9 - 4 = 5

M1dep

53 = 125 and 93 = 729 and 5, 6, 7, 8, 9 or 9 - 4 = 5 and (43 =) 64 and (103 =) 1000

Α1

Alternative method 3 of 4

М1

$$\sqrt[3]{999} = 9.9...$$
 or $\sqrt[3]{1000} = 10$

М1

³√100 = 4.6...

and
$$\sqrt[3]{999} = 9.9...$$
 or $\sqrt[3]{1000} = 10$ and 5, 6, 7, 8, 9 or $9 - 4 = 5$

A1

Alternative method 4 of 4

$$53 = 125$$

М1

$$10^3 = 1000 \text{ or } \sqrt[3]{1000} = 10$$

М1

$$43 = 64$$
 and $53 = 125$
and $10^3 = 1000$ or $\sqrt[3]{1000} = 10$
and 5, 6, 7, 8, 9 or 9 – 4 = 5

A1

[3]

Q11.

(a) 343

В1

(b) Any two cube numbers from 8 or 27 or 64 or 125 or 216

М1

125 and 216

Any order

Accept 53 and 63

Accept 5 and 6

Α1

[3]

Q12.

34

Any unambiguous indication В1 [1] Q13. 10 000 В1 [1] Q14. (a) 24 В1 7.5(26...) (b) В1 6.25 or $6\frac{1}{4}$ or $\frac{25}{4}$ (c) В1 [3] Q15. (a) 16 В1 (b) 511 В1 [2] Q16. 27

[1]

В1