

Indices

Video 172 on Corbettmaths

Examples

Workout



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Question 1: Write out in full.
e.g. $7^4 = 7 \times 7 \times 7 \times 7$

- (a) 9^2 (b) 10^3 (c) 2^5 (d) 3^8 (e) 5^3 (f) 4^6 (g) 1^3
(h) 6^7 (i) 12^3 (j) 50^2 (k) 1^9 (l) 8^4 (m) 9^3 (o) 0.5^3

Question 2: Using a calculator, work out the answers to Question 1.
Use the power button.

Question 3: Write the following in index notation.
e.g. $5 \times 5 \times 5 = 5^3$

- (a) $4 \times 4 \times 4$ (b) $7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7 \times 7$ (c) $2 \times 2 \times 2 \times 2 \times 2 \times 2$
(d) $8 \times 8 \times 8 \times 8$ (e) $10 \times 10 \times 10 \times 10 \times 10$ (f) $3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3 \times 3$
(g) $0.9 \times 0.9 \times 0.9$ (h) $5 \times 5 \times 5 \times 5 \times 5 \times 5 \times 5 \times 5 \times 5 \times 5$ (i) $120 \times 120 \times 120 \times 120$
(j) 2×2

Question 4: Using a calculator, work out the answers to Question 3.
Use the power button.

Question 5: Without using a calculator, find the values of the following

- (a) 10^2 (b) 3^3 (c) 2^6 (d) 5^3 (e) 10^3 (f) 4^3 (g) 1^5
(h) 2^7 (i) 1^8 (j) 10^5 (k) 14^2 (l) 5^4 (m) 10^6 (n) 9^3

Question 6: Find the values of

- (a) 2^2 (b) 2^3 (c) 2^4 (d) 2^5 (e) 2^6 (f) 2^7 (g) 2^8

Question 7: Find the values of

- (a) 10^2 (b) 10^3 (c) 10^4 (d) 10^5 (e) 10^6 (f) 10^7 (g) 10^8

Apply

Question 1: Can you spot any mistakes?

$$6^2 = 12$$

$$1^7 = 7$$

$$10^4 = 40$$

$$2^6 = 32$$

Question 2: Fill in the boxes with possible integers.

$$\square^{\square} = 81$$

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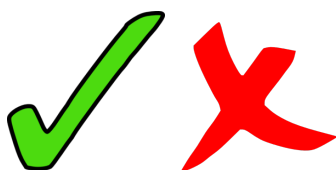
Question 3: Fill in the boxes with possible integers.

$$\square^{\square} = 64$$

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$$\square^{\square} = 64$$

Answers



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