Name:

Exam Style Questions

Cube Numbers
Cube Roots

Corbettmaths

Equipment needed: Calculator and Pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Videos 212, 213, 214

Answers and Video Solutions

1. Here is a list of numbers

1 4 7 12 20 81 100

From the list, write down the cube number.

$1^3 = 1$ $5^3 = 125$

$2^3 = 8$

$3^3 = 27$

$4^3 = 64$

1

.....

(1)

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2. Circle the cube number

100 (125) 133 180

(1)

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3. From the list of numbers

3 6 (8) 14 16 28 41 (64)

(a) write down the cube numbers

8 ..... and 64 .....

(2)

(b) write down the cube root of 27.

3

.....

(1)

4. Write down the value of

(a) 1^3

1

(1)

(b) ten cubed $10 \times 10 \times 10$

1000

(1)

(c) 5^3 $5 \times 5 \times 5$

125

(1)

(d) 6 cubed $6 \times 6 \times 6$ $36 \times 6 = 216$

216

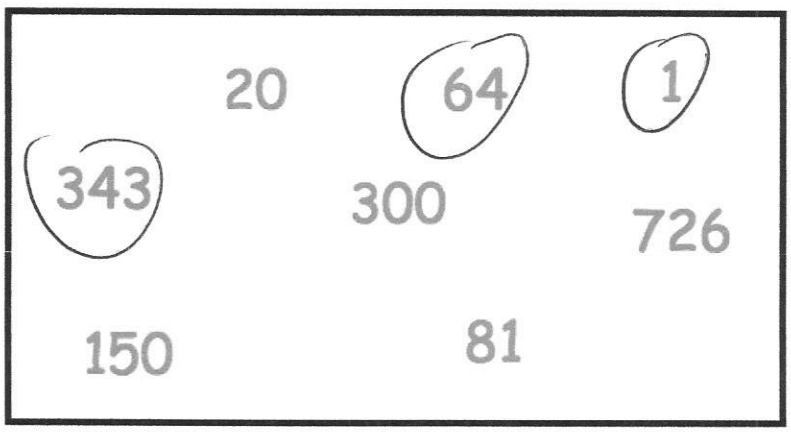
(1)

(e) 8^3 $8 \times 8 = 64$ $64 \times 8 = 512$

512

(2)

5.



Circle all the cube numbers.

$7 \times 7 \times 7$

$7 \times 7 = 49$ $9 \times 9 = 81$

$49 \times 7 = 343$ $81 \times 9 = 729$

$1^3 = 1$
$2^3 = 8$
$3^3 = 27$
$4^3 = 64$
$5^3 = 125$
$6^3 = 216$
$7^3 = 343$
$8^3 = 512$
$9^3 = 729$
$10^3 = 1000$

(2)

6. Write down the value of

(a) $\sqrt[3]{64}$

4

(1)

(b) $\sqrt[3]{8}$

2

(1)

(c) $\sqrt[3]{0}$

0

(1)

(d) $\sqrt[3]{1000}$

10

(1)

7. Calculate 7.1^3

357.911

(1)

8. Calculate $\sqrt[3]{614.125}$

8.5

(1)

9. Write down all the cube numbers between 100 and ~~1000~~ 999

$5^3 = 125$

$6^3 = 216$

$7^3 = 343$

$8^3 = 512$

$9^3 = 729$

125, 216, 343, 512, 729

(3)

10. Circle the number that is **double** a cube number.

4 8 50 54 64

2×27

(1)

11. Hollie says "when you cube root a number, the answer is always smaller."

Show she is wrong.

$\sqrt[3]{1} = 1$

$\sqrt[3]{0} = 0$

$\sqrt[3]{0.125} = 0.5$ etc

(2)

12. Write down a cube number that is greater than 100 and less than 200.

125

(1)

13. Arrange these in order, starting with the smallest.

2^2 $\sqrt[3]{27}$ 1^3 $\sqrt{25}$

4 3 1 5

1^3, $\sqrt[3]{27}$, 2^2, $\sqrt{25}$

(2)

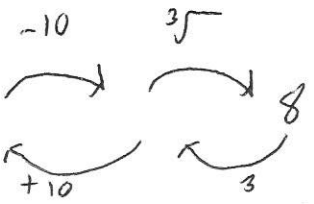
14. 729 is both a square number and a cube number.

Find two other numbers that are both square numbers and cube numbers.

1 and 64

(2)

15. Isla thinks of a number



She subtracts 10 and then finds the cube root of the answer.
The answer is 8

What number did Isla think of?

$8^3 = 512$

$512 + 10 = 522$

522

.....

(2)

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16. Don says

"the difference between two consecutive cube numbers is always odd."

Is Don correct?
You must show your workings.

odd × odd × odd = odd

even × even × even = even

even − odd = odd

odd − even = odd

$8 - 1 = 7$

$27 - 8 = 19$

$64 - 27 = 37$

Yes, he is correct

(2)