THIRD SPACE LEARNING

HELLO!

Today we are going to revise square/cubed numbers and BIDMAS

THIRD SPACE LEARNING

Arithmetic Warm Up

1. $365 \div 1 =$ ☐

2. $6 \times 6 =$ ☐

3. $2 \times 2 \times 2 =$ ☐

You are revising square/cube numbers and BIDMAS (Meeting Y6 expectations)

THIRD SPACE LEARNING

Revision on square/cubed numbers and BIDMAS

Today we are going to revise how to:

- recognise and use both square and cube numbers
- order of operations (BIDMAS)

Square numbers

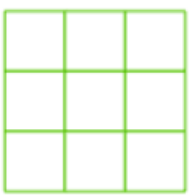
$3^2 = 3 \times 3 = 9$

Multiplied together 2 times

3 squared **or** *3 to the power of 2*

1 = 1 × 1

4 = 2 × 2



9 = 3 × 3

Cube numbers

$2^3 = 2 \times 2 \times 2 = 8$

Multiplied together 3 times

2 cubed **or** *2 to the power of 3*

1 x (1 × 1)

=1

2 × (2 ×2)

= 2 × 4

= 8

3 × (3 ×3)

= 3 × 9

= 27

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Question 1

1. What do you notice?
2. What do you know?
3. Can you show your working out?
4. How could you extend the question?

Complete

1 x 1 =

2 x 2 =

3 x 3 =

4 x 4 =

5 x 5 =

6 x 6 =

7 x 7 =

8 x 8 =

9 x 9 =

10 x 10 =

11 x 11 =

12 x 12 =

36 and 64 are both square numbers.

They have a sum of 100

Find two **square** numbers that have a sum of **130**

 and

Revision: Order of operations

There is an agreed order of operations for calculations

BIDMAS

Brackets
Indices
Division or
Multiplication (left to right)
Addition or
Subtraction (left to right)

'Indices' are powers, for example, 2^3 or 4^2

Work these out:

a) $5 \times 4 - 2 \times 3 + 16 \div 4$

b) $3^3 + (5 \times 3 - 2^2)$

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Question 2

1. What do you notice?
2. What do you know?
3. Can you show your working out?
4. How could you extend the question?

Complete

Here are five number cards.

$\frac{1}{2}$ $1\frac{1}{2}$ 2 $2\frac{1}{2}$ $3\frac{1}{2}$

Use **three** of the number cards to make this calculation correct.

$(\square + \square) \times \square = 10$

You are revising square/cube numbers and BIDMAS (Meeting Y6 expectations)

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Let's review:

- recognise and use both square and cube numbers
- order of operations (BIDMAS)

Draw a circle around the smiley face to show how you feel about what we've just been doing.

You are revising square/cube numbers and BIDMAS (Meeting Y6 expectations)

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CHALLENGE

Use the space provided to complete the following question.

1. What do you notice?
2. What do you know?
3. Can you show your working out?
4. How could you extend the question?

Lara chooses a **square number**.

She rounds it to the nearest hundred.

Her answer is 200

Write **all** the possible square numbers Lara could have chosen.

THIRD SPACE LEARNING

Square numbers

Circle the answers on the grid.

1 × 1

2 × 2

4 × 4

7 × 7

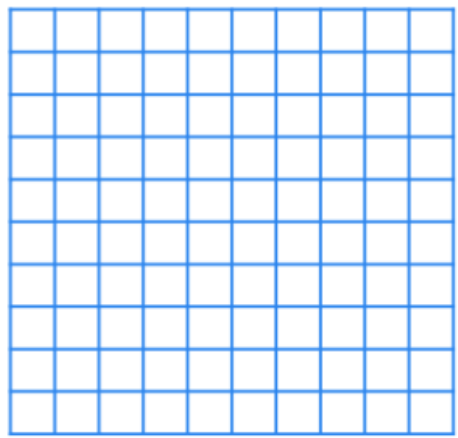
9 × 9

	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

THIRD SPACE LEARNING

Square numbers up to 100

1^2	2^2	3^2	4^2	5^2	6^2	7^2	8^2	9^2	10^2
1	4	9							



THIRD SPACE LEARNING

Shorthand for cubes

$2^3 = 2 \times 2 \times 2 = 8$

Multiplied together 3 times

2 cubed **or** *2 to the power of 3*

1. 3 cubed or ☐
2. 4 to the power of 3 or ☐
3. 10 × 10 × 10 or ☐

THIRD SPACE LEARNING

Cubes of 1, 2, 3, 5 and 10

1^3	2^3	3^3	5^3	10^3
$1 \times 1 \times 1$	$2 \times 2 \times 2$	$3 \times 3 \times 3$		$10 \times 10 \times 10$
1	8			

Following the BIDMAS order of operations in calculations

Try these:

1. $2 + 3 \times 5 =$

2. $5 - 9 \div 3 =$

3. $4^2 \div 2 =$

Remember BIDMAS

THIRD SPACE LEARNING

Square numbers

Can you count up in square numbers from 1 x 1 = 1 up to 12 x 12 = 144

1 x 1 =	7 x 7 =
2 x 2 =	8 x 8 =
3 x 3 =	9 x 9 =
4 x 4 =	10 x 10 =
5 x 5 =	11 x 11 =
6 x 6 =	12 x 12 =

Cube numbers

Work out $4^2 - 2^3$

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