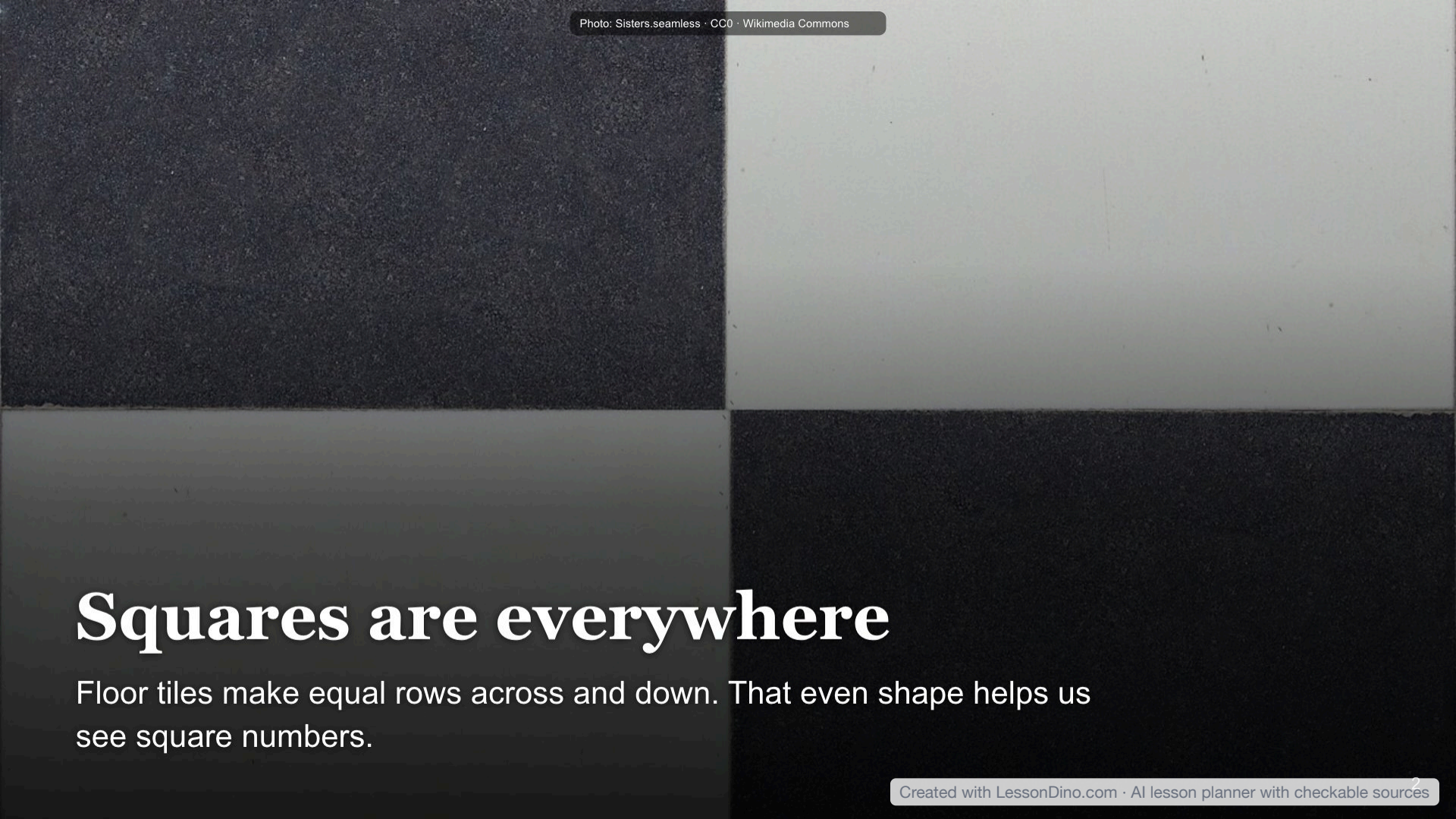
Square and Cube Numbers

Spot them, write them and use them



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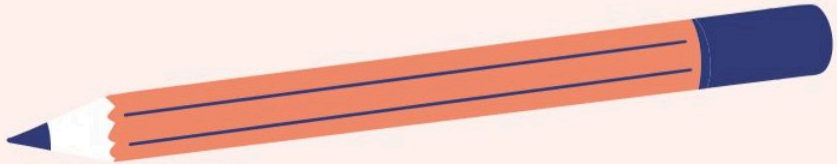
Squares are everywhere

Floor tiles make equal rows across and down. That even shape helps us see square numbers.

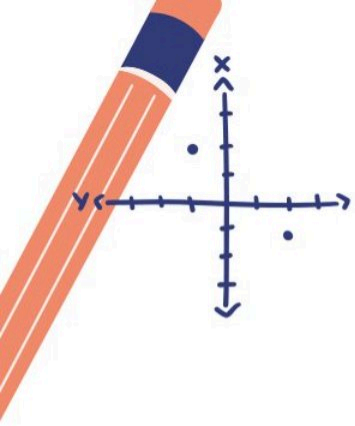
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How to make them

1. Pick a whole number, like 4
2. For squared: do 4 x 4 = 16
3. For cubed: do 4 x 4 x 4 = 64
4. Say 4 squared and 4 cubed



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What squared ^{2} means

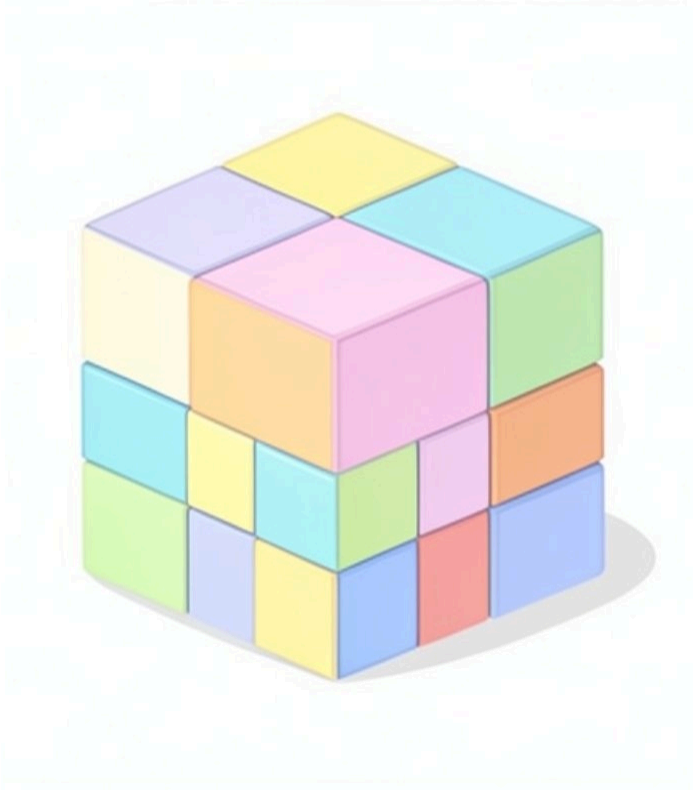
1. ^{2} means times a number by itself
2. $3^2 = 3 \times 3 = 9$
3. 9 dots make a 3 by 3 square

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What could this be?

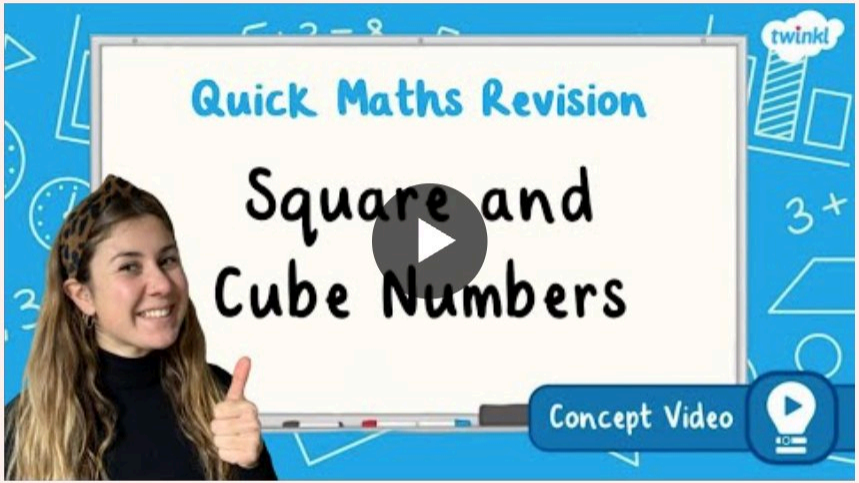
I stacked 27 tiny blocks into a big cube. Which cubed number am I?





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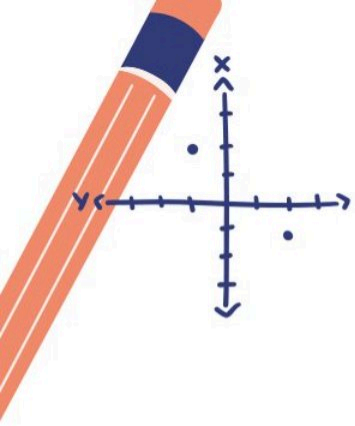
Watch: squares and cubes



▶ 0:00 – 4:06

- Listen for squared ^{2} and cubed ^{3}
- Watch how blocks make squares and cubes

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Squared or cubed?

Squared ^{2}

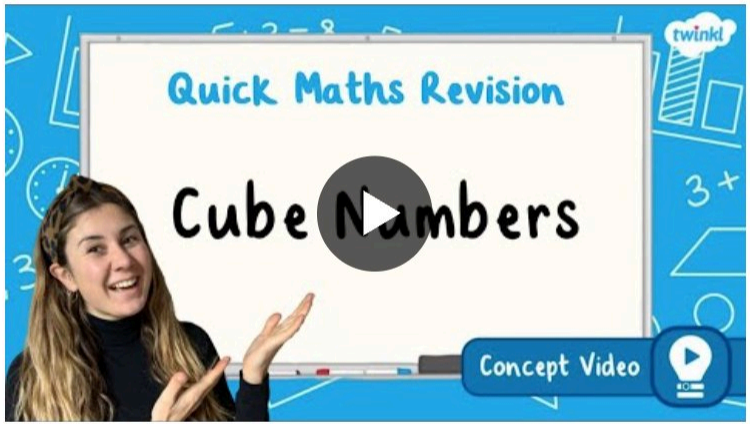
- number x itself
- e.g. $5^2 = 25$
- makes a flat square

Cubed ^{3}

- number x itself x itself
- e.g. $2^3 = 8$
- makes a solid cube

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Watch: cube numbers up close



▶ 0:00 – 2:21

- Spot $2^3 = 8$ and $3^3 = 27$
- Notice cubing is not doubling

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Your task

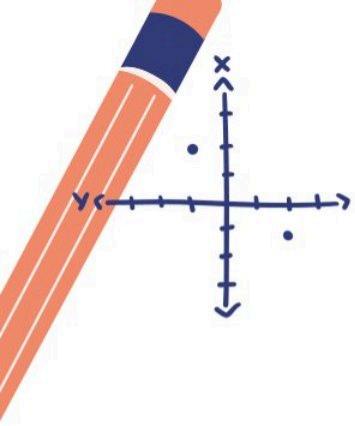
In pairs, sort these numbers into square, cube or neither: 8, 9, 12, 16, 27, 36, 50, 100, 125.

1. Match 1^2 to 10^2 and 1^3 to 5^3
2. Check 5^2 is 25, not 10
3. Explain one match to your partner

10 min

In pairs

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Numbers to know cold

🔲

$4^2 = 16$

4 rows of 4 make a square.

🟧

$9^2 = 81$

9 times 9 gives 81.

🧊

$2^3 = 8$

2 by 2 by 2 makes a cube.

⭐

64 is special

64 is 8^2 and also 4^3.

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Best way to remember?

Which trick will you use most?

A Draw dot squares and block cubes

B Say facts aloud until fast

C Look for patterns in lists

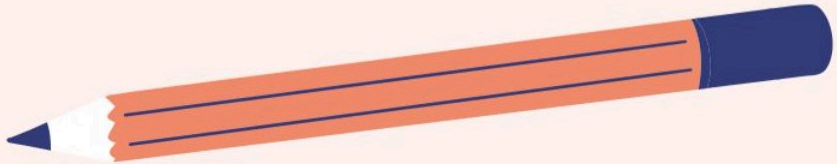


Vote with your hands, then explain why.

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Quick quiz

1. What is 4^2?
2. What is 3^3?
3. Is 10 a square number?
4. Which number is both 8^2 and 4^3?



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