



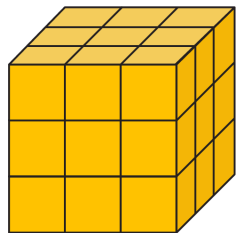
FLUENCY 1

Complete the sentence.

A cube number is the product of _____
a whole number by itself _____ times.

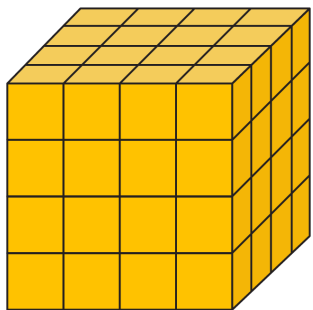
FLUENCY 2

Complete the statements.



This is 3 cubed.

___ x ___ x ___ = ___³



This is ___ cubed.

___ x ___ x ___ = ___³

FLUENCY 3

Order each set of cards from smallest to greatest.

A 12^2 90 6^3 7^2 4^3

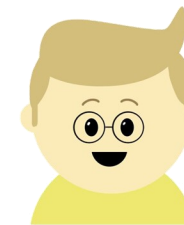
B 5^3 500 10^2 9^3 11^2

FLUENCY 4

Alfie is eight years old and his mum is thirty.

Alfie's dad is younger than his mum
and his age is a cube number.

How old is Alfie's dad?





REASONING 1

Which is the odd one out?

64

4^3

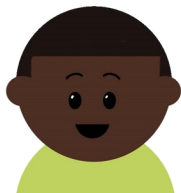
8^2

12

Convince me.

REASONING 2

Caleb has been learning about square and cube numbers.



If 2^2 is 4 then 2^3 must be 6.

Do you agree with him? Explain your reasoning.

REASONING 3

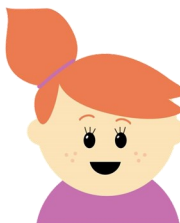
Always, Sometimes or Never?

Prove your answer with examples.

Cube numbers have an odd number of factors.

REASONING 4

Millie has completed the table below.



| | Square Numbers | Cube Numbers | Prime Numbers |
|--------------|----------------|--------------|---------------|
| Odd Numbers | 121 49 | 345 729 | 53 1 |
| Even Numbers | 144 8 | 236 512 | 2 |

Has she filled it in correctly? Prove it.





PROBLEM SOLVING 1

Help Anita to make each total using the cards below.

You may use as many cards as you like but you can only use them once for each calculation.



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

| | | |
|-----|-----|-----|
| 340 | 308 | 415 |
| 272 | 520 | 350 |

You can use any operation you like.

How many different ways can you make each target number?

PROBLEM SOLVING 2

Complete the maze by following the cube numbers.

START

| | | | | | |
|-----|-----|-------|-----|-----|-------|
| 8 | 512 | 1,000 | 9 | 150 | 720 |
| 4 | 25 | 343 | 81 | 30 | 6 |
| 49 | 144 | 27 | 3 | 24 | 236 |
| 15 | 12 | 1,331 | 216 | 100 | 16 |
| 39 | 45 | 121 | 1 | 36 | 21 |
| 164 | 999 | 18 | 125 | 64 | 729 |
| 300 | 79 | 33 | 54 | 13 | 1,728 |

FINISH

