



YR5 PROGRESSION IN MASTERY LESSON PACK - SQUARE NUMBERS

FLUENCY 1

Complete the sentence.

A square number is the product of multiplying a number by _____.

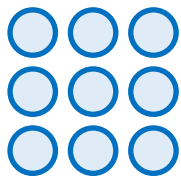
FLUENCY 2

Complete the statements.



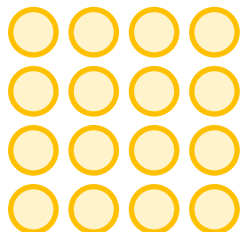
This is 2 squared.

___ x ___ = ___



This is ___ squared.

___ x ___ = ___



This is _____.

___ x ___ = ___

FLUENCY 3

Which calculation does not have an answer card?

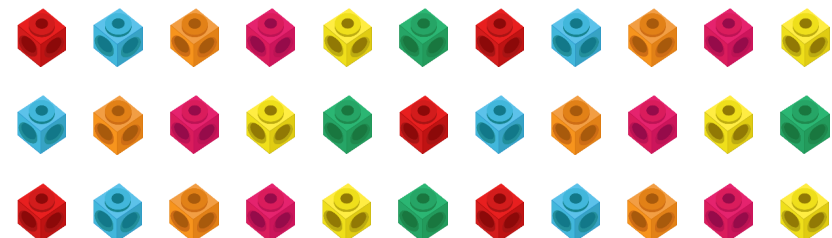


FLUENCY 4

Jerry wants to represent 7^2 using multi-link cubes.

He has 33 cubes altogether.

How many more does he need?



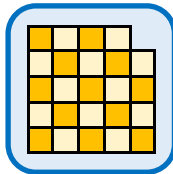


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REASONING 1

Which is the odd one out?

$$5 \times 5$$



$$5^2$$

Convince me.

REASONING 2

Always, Sometimes or Never?

“Square numbers have an odd number of factors.”

Prove your answer with examples.



REASONING 3

Jane has written a list of the first 12 square numbers.

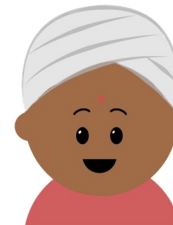


2, 4, 9, 16, 25, 36, 49,
64, 81, 100, 122, 144

Has she done this correctly? Prove it.

REASONING 4

Ranjit has been learning about square numbers.



A square number cannot be a prime number.

Do you agree with him? Explain your reasoning.



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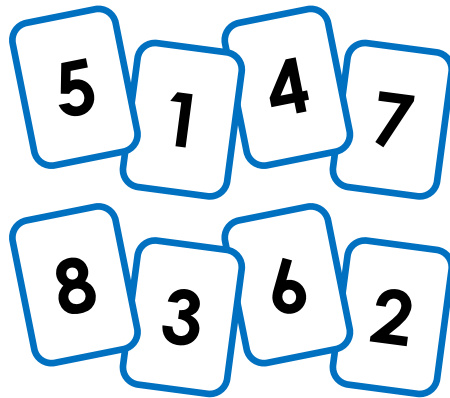
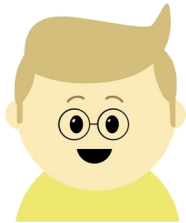
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YR5 PROGRESSION IN MASTERY LESSON PACK - SQUARE NUMBERS

PROBLEM SOLVING 1

Help Alfie to create square numbers using the digit cards.



You can only use each card once per number.

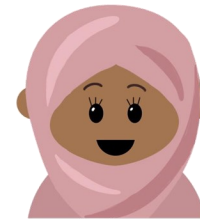
How many square numbers can you create?

Can you find a way to use all of the cards to create 5 square numbers?

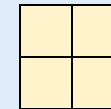
PROBLEM SOLVING 2

Asha is landscaping her garden with 75 square slabs.

She wants to piece together the slabs to create a number of different sized square features amongst the stones.



For example, a square feature which is 2 square slabs by 2 square slabs will use 4 slabs and Asha will have 71 left.



What combinations of squares is Asha able to choose from for the features in her garden?

Can you find a solution that uses all of the slabs?

