

Getting Started

Strategies to tackle problems =)

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Goal

Participants will compile a list of problem solving strategies through math task and to show them a way to teach their students about problem solving strategies



Mathematical Practice

MP1: Make sense of problems and persevere in solving them



Instructions

- Attempt the problem with your group
- Be ready to share your strategies



Having Kittens



Cats can't add but
they do multiply!

In just 18 months, this female cat
can have 2000 descendants.

Work out whether this number of
descendants is realistic.
Here are some facts that you will
need:

Length of
pregnancy

About
2 months

Number of kittens
in a litter

Usually
4 to 6

Age at which a
female cat can
first get pregnant

About
4 months

Average
number of litters a
female cat can
have in one year

3

Age at which a
female cat no
longer has kittens

About
10 years



Strategies Used to Start the Problem

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Buckets of Strategies



Sample Work

- Use sample work to discuss what kind of different strategies were used
- Do these strategies compare to what we came up with?

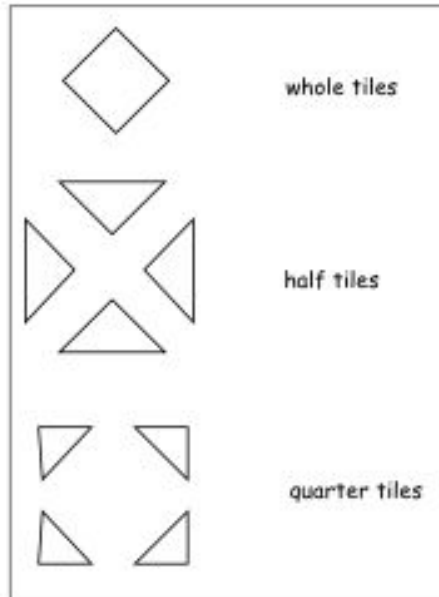


Table Tiles

Maria makes tables with square tops. She sticks tiles to the top of each table.



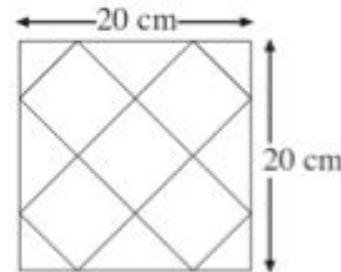
Maria uses three types of tiles:



The sizes of the square tabletops are all multiples of 10 cm.

Maria only uses quarter tiles in the corners and half tiles along the edges of the table.

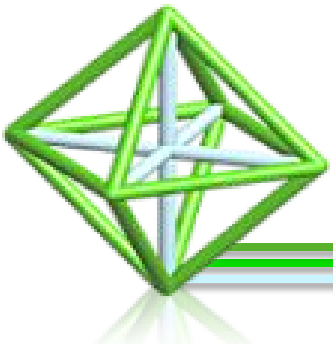
Here is one tabletop:



This square tabletop uses:
5 whole tiles, 4 half tiles, 4 quarter tiles.

Questions

1. How many tiles of each type will she need for a 40 cm by 40 cm square?
2. Describe a method for calculating how many tiles of each type Maria needs for larger square tabletops



Discussion Questions

- How could you implement something like this into your classroom?
- How can you help your students use these strategies?



Reflection

Write down:

- One takeaway from today's session
- Your next step for implementation

Be ready to share out



References

Math Shell

Having Kittens:

<http://map.mathshell.org/lessons.php?unit=9100&collection=8>

Table Tiles:

<http://map.mathshell.org/lessons.php?unit=9200&collection=8>



Thank you!

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