

Y6 Learning at home activity sheet #4

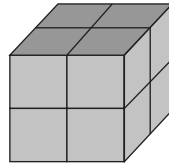
Problem 1:

How many days old are you? Remember: There are 365 days in a year, but 366 in a leap year. There is a leap year every fourth year. 2020 was a leap year.



Problem 2:

If you stack eight cubes into one bigger cube like in the image below, then paint the outside of the bigger cube, what fraction of the faces of the original small cubes have you painted?



Problem 3:

If I have three different coins in my pocket, how much money might I have?



Number facts:

Cut out the cards on the attached sheet and shuffle them. How fast can you match each equation with the correct answer? Try to beat your time.



Quick questions:

1. How many sides does a pentagon have?
2. How many grams are there in a kilogram?
3. What is $\$3.50 \div 7$?
4. Write 0.1 as a fraction.
5. What is half of 104?
6. If you roll a dice, is an even number or an odd number more likely?
7. How many centimetres is 1.7 metres?
8. Which is more, $\frac{1}{3}$ or $\frac{2}{8}$?
9. What is $\frac{1}{4}$ of 24?
10. What is 7×12 ?



Project:

Draw a large square on a piece of paper.

Now mark the middle of each side. Join these points to make a new shape. What shape have you made? What fraction of the starting shape is its area?

Mark the middle of each side of your new shape and join those points. Keep repeating these steps.

You may want to try this activity with a triangle or other shapes.



Number challenge:

Pick a three-digit number. Write it in the middle of a piece of paper. Around the number, write as many different ways to say that number as you can. Here are some ideas to help:

- Write the number in words
- Write the number in different languages
- Draw the number in 10s and 1s

Write some equations that equal the number.



Learning at home: Notes for whānau

When your child finishes each activity, ask them to add a mouth to the face to show how they felt about that activity.



Problem 1:

If your child is 10 or older, they should be able to calculate how many days there are in ten years by multiplying 365 by 10 (3650) and adding on one for each leap year. They can then add on the days for each extra full year and for the months and extra days to make their age.

Problem 2:

Each of the smaller cubes is on a corner of the larger cube, so for each one, three faces are inside the larger cube and three are outside. $3 \times 8 = 24$ faces of smaller cubes will be painted. There are a total of $6 \times 8 = 48$ faces on the smaller cubes.

The fraction painted is $\frac{24}{48}$ or $\frac{1}{2}$.

Problem 3:

It pays to be systematic to solve this problem.

If I have a \$2 coin, there are five possibilities:

- $\$2 + \$1 + 50c = \$3.50$
- $\$2 + \$1 + 20c = \$3.20$
- $\$2 + \$1 + 10c = \$3.10$
- $\$2 + 50c + 20c = \2.70
- $\$2 + 50c + 10c = \2.60

If my largest coin is a \$1 coin, there are three possibilities:

- $\$1 + 50c + 20c = \1.70
- $\$1 + 50c + 10c = \1.60
- $\$1 + 20c + 10c = \1.30

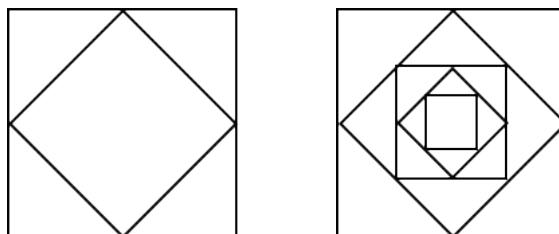
If my largest coin is a 50c coin, there is only one possibility:

- $50c + 20c + 10c = 80c$

Project:

If you draw a shape joining the middle of each side of a square, you will get a second smaller square, rotated to look like a diamond. The smaller square is exactly half the area of the larger one. If you imagine the four corners of the larger square folding in you can see how they would exactly cover the smaller square.

If you keep repeating, you will get smaller and smaller squares, until they become too small to draw!



Number challenge:

This is an open-ended challenge. You may be able to help your child with writing their number in other languages. They should be able to write several equations that equal the number. Encourage them to use different operations (addition, subtraction, multiplication, and division). They may even use several in one equation, for example $6 \times 10 + 64 = 664$.

Quick questions:

1. 5
2. 1000
3. 50c
4. $\frac{1}{10}$
5. 52
6. Equally likely
7. 170
8. $\frac{1}{3}$
9. 6
10. 84

3×4	12	3×6	18
3×7	21	3×8	24
3×9	27	4×4	16
6×6	36	7×7	49
8×8	64	9×9	81
4×6	24	4×7	28
4×8	32	4×9	36
6×7	42	6×8	48
6×9	54	7×8	56
7×9	63	8×9	72