Problem One (Calculations with whole number)

There are eight arms on one octopus. If you count 200 arms how many octopi is that?

Problem Two (Fractional numbers)

Who eats the most apple pie? How do you know?

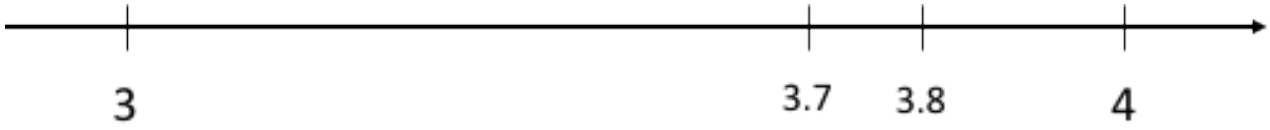
Ken eats one third.

Rewa eats two fifths.

Sala eats three eighths.

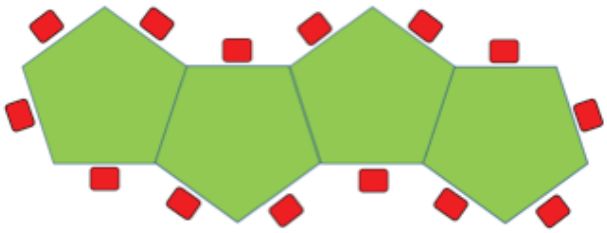
Problem Three (Decimal fractions)

Put three decimals on this number line that exist between 3.7 and 3.8



Problem Four (Patterns and relationships)

If 25 pentagonal tables were joined end on end like this, how many seats would there be?



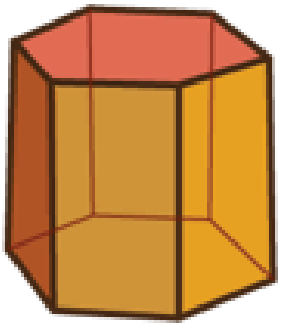
Problem Five (Measurement)

What is the area of this notebook in cm^2 (square centimetres)?

Problem Six (Shapes and solids)

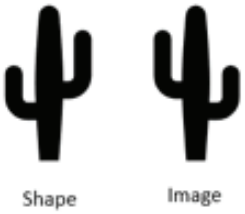
What is the name of this solid?
Sketch the net of the solid.

The net is the flat pattern of the solid opened out.



Problem Seven (Reflections and rotations)

Something has happened to each shape to create the image.
Write as much as you can about what has happened.



Problem Eight (Probability)

You have these single socks in your drawer.

If you reach into the drawer and take two socks without looking, what are the chances that the socks match?

Answers:

Problem One
200 ÷ 8 = 25

Problem Two
2/5 is the biggest fraction so Rewa eats the most pie. 1/3=2/6 which is less than 2/5. 3/8 = 0.375 and 2/5 = 0.4.

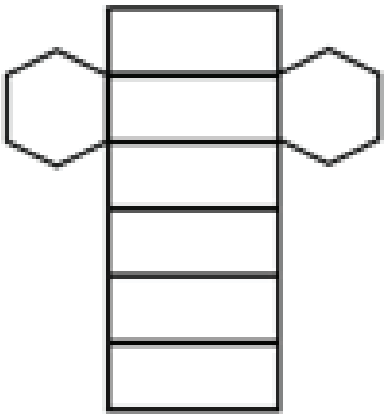
Problem Three
3.71, 3.72, 3.73, 3.74, 3.75, 3.76, 3.77, 3.78, and 3.79 all work. There are an infinite number of decimals that work.

Problem Four
77 seats

Problem Five
16.5 x 10 = 165 cm2

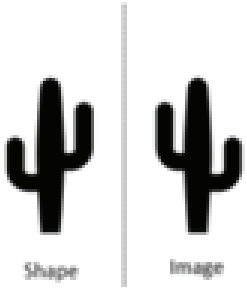
Problem Six

Hexagonal prism
This is one net that works:



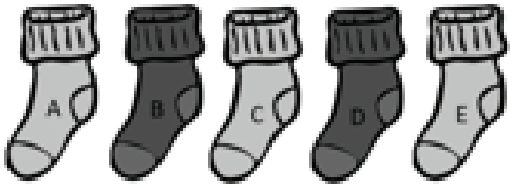
Problem Seven

Reflection in dotted line



Half turn about the point

Problem Eight



If you label the socks A-E the pairs that match are AC, AE, BD, and CE

The pairs that don't match are AB, AD, BC, BE, CD, and DE.

4 out of ten pairs match. The probability is 4/10.