

Year 6

Number Awareness

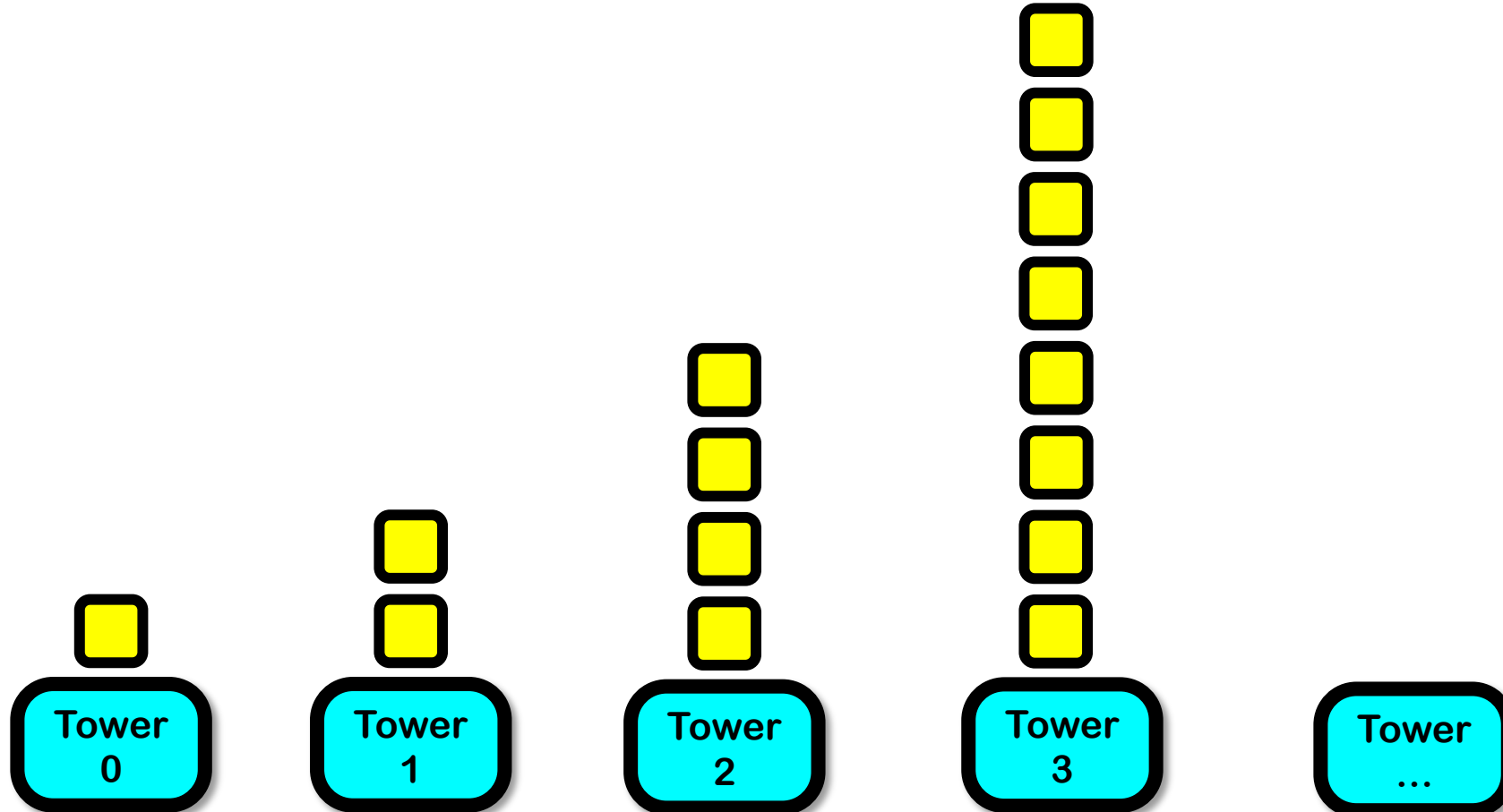
Week 7

1,2,4,8,16,...

Notes for teachers in school or at home:

- Investigate and explore the numbers based on 10:
 - Thousand, million, billion...
- Multiply and divide by 10, 100 and 1000
- Explore metric measures
- Understand simple fractions of large numbers

Double, double, double, double...



How many blocks will you need to build Tower 10?

Which Tower would be the first to use more than 2000 blocks?

Which tower would be the first to exceed 1km in height?

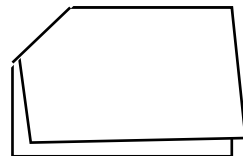
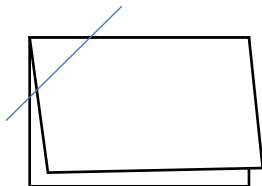
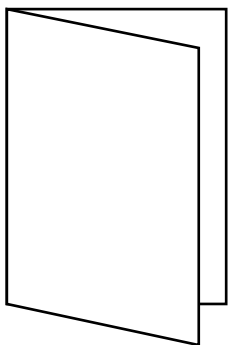
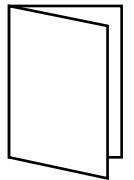
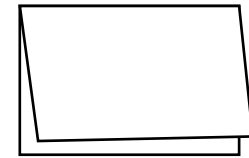
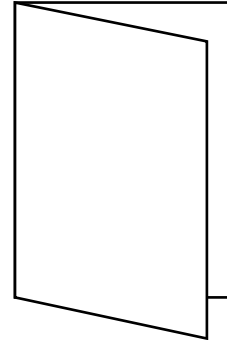
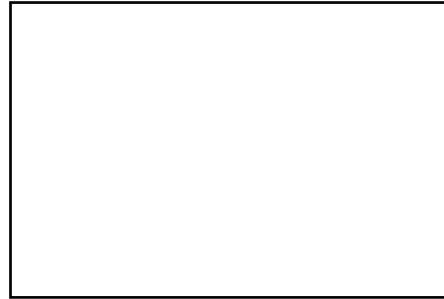


Halve, halve, halve

Fold a piece of paper in half,
then half again, then half
again.

What will it look like when you
unfold?

Predict, then unfold to check



Fold in half twice.

Cut a shape from the fold.

What will it look like when you
open up?

Experiment with different shapes
cut out.

If you fold a sheet
2 times, you get 4
layers.

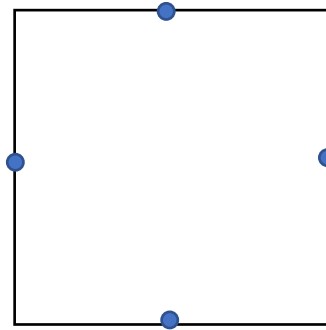
How many layers
if you fold in half 6
times in a row?

Try it!

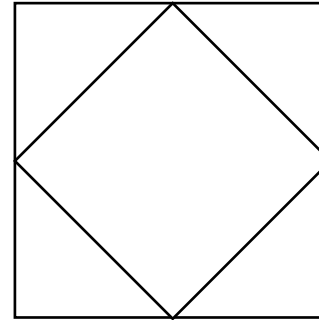
Measures!

Have you seen this pattern
before?

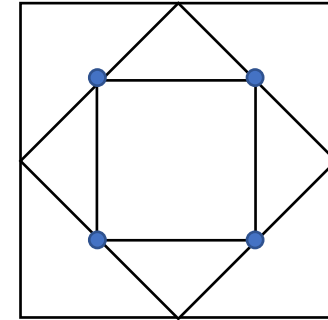
Start with a square.



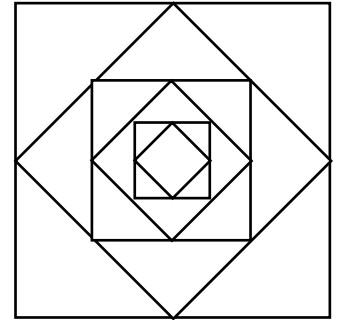
Measure exactly
halfway along
each side.



Join the halfway
points to make a
new square.



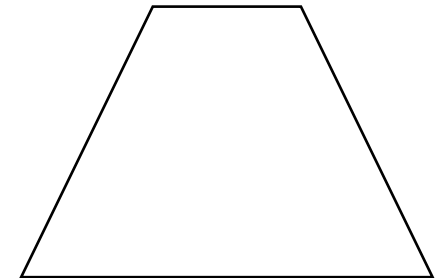
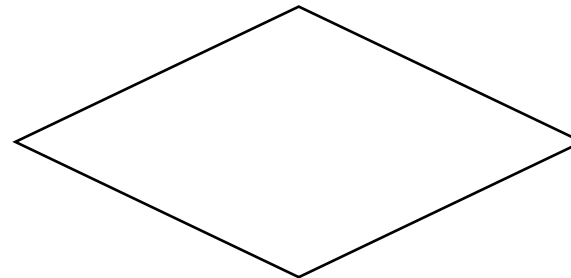
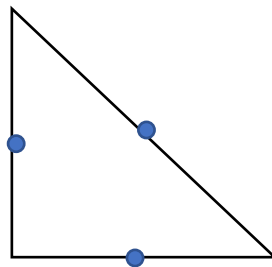
Measure the
new halfway
points and join
them



Repeat, repeat,
repeat...

Try different starting shapes.

Be as accurate as you can with
your ruler.



Halving numbers

Choose a starting number. Halve it, then halve the answer, then halve the answer, then...

... keep going until you get a decimal or fraction as your answer.

500

888

96

150

3000

768

100

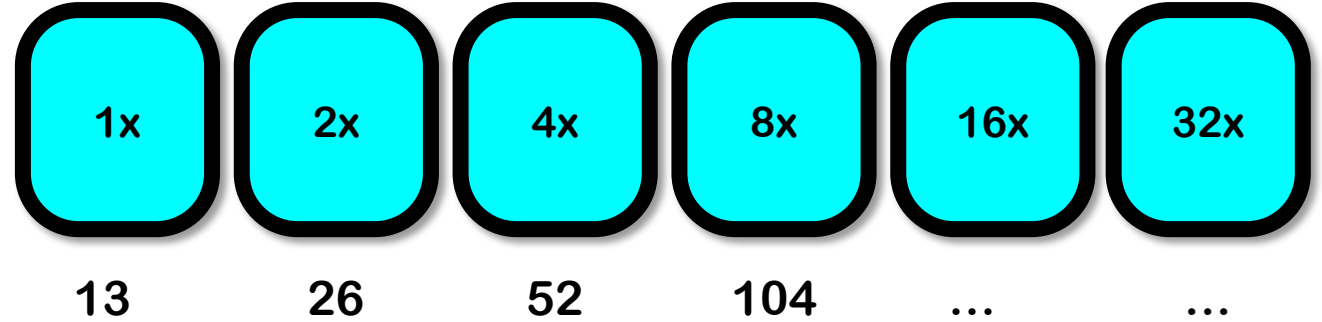
7000

Which starting number gets you closest to 1?

Multiplying using doubles

Continue this doubling pattern.

Use it to work out 32×13



How does this method work for multiplying 13 by 12

So, 4 lots of 13 is 52...

And 8 lots of 13 is 104...

So... I can work out 12 times 13 by adding 52 and 104

What other multiplications in the 13x table can you work out like this?

5x13

9x13

7x13

36x13