Christ-Maths Activities

Read through the lyrics to this well-known Christmas song and then answer the questions underneath.

On the twelfth day of Christmas,
my true love sent to me
Twelve drummers drumming,
Eleven pipers piping,
Ten lords a-leaping,
Nine ladies dancing,
Eight maids a-milking,
Seven swans a-swimming,
Six geese a-laying,
Five golden rings,
Four calling birds,
Three French hens,
Two turtle doves,
And a partridge in a pear tree!

Questions

1) How many presents were given by my true love all together?
2) How many birds were sent by my true love?
3) How many people did my true love send to entertain me?
4) How many wings are there in the song?
5) How many legs are there in the song?
6) If I have to share all of my presents with one other person, how many presents would we each have?

Remember: show all your working out on a separate piece of paper!

SNOWFLAKE SHAPES

We will be making our own snowflakes today, and we will use them to investigate different shapes!

1.   Take a square of paper and fold in half once, and then in half again [you should have folded it in to quarters!]

2.   Use a pair of scissors and cut out **half** of some shapes from the edges of the paper, e.g. a semi-circle – **Cut different half shapes** and make sure that you don't cut along all of the fold!

3.   Unfold the paper so that you have a flat, whole piece again.

4.   What *different shapes* can you now see in the pattern of the snowflake? Make a note of these in your book, and count how many you have of each shape all together.

5.   Repeat this with another piece of paper, but try folding it in to smaller sections, i.e. eights, etc, and cut out some different half shapes – triangles, ovals, etc

6.   Record the shapes you have made this time in your book.

THINK...

- Can you make a snowflake that only has four-sided shapes as part of it's pattern? What about three-sided shapes?
- Could you cut more complex shapes in to the folded paper?
- How many lines of symmetry does your snowflake have?
- Can you rotate the snowflake so that it looks the same?

Room for Reindeer

Santa Claus has a problem - he needs to build stables for all of his reindeer to live in! Each reindeer needs a 5m x 5m space to live in comfortably. So...

1 🦌 = ⬜ 5m
5m
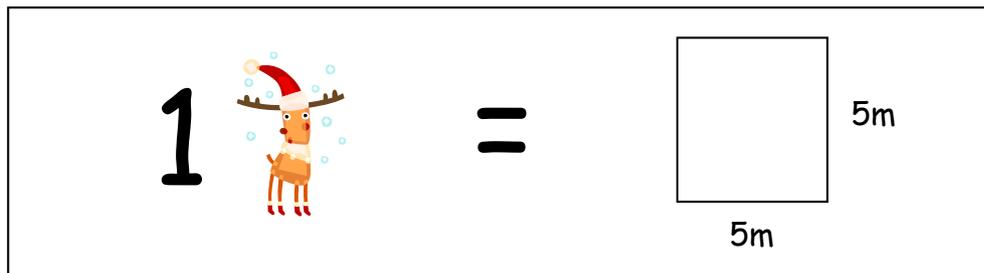
Using the squared paper in your exercise books, can you draw rooms in which the following number of reindeer can live? [*One square in your book = a 5m x 5m square*]. All rooms should have at least two walls which are the same length...

1) 2 Reindeer
2) 5 Reindeer
3) 8 Reindeer
4) 13 Reindeer
5) 20 Reindeer

Remember to mark on the length of each of the walls of these Reindeer stables **in metres**, i.e. 5m x 10m.

When you have finished drawing the rooms and have marked on the lengths of each wall, Santa needs even more information! For each of the rooms could you please calculate:

1) The total perimeter in metres;
2) The total area in metres **squared**

Remember to include all measurements and working out!