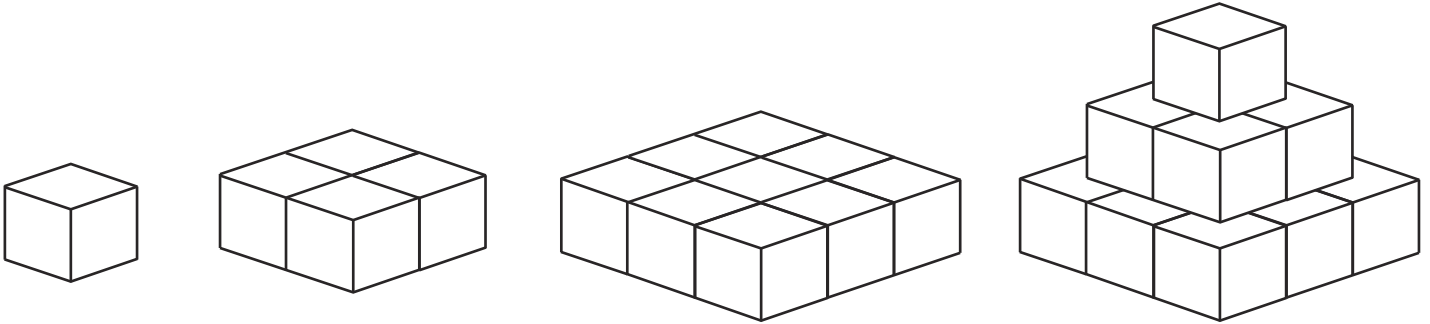


# Making Pyramids

The ancient Egyptians made their pyramids by cutting stone into blocks and placing them in layers in a square arrangement, one layer on top of another, getting smaller and smaller as they got to the top. They would need to predict how many blocks they would need to make pyramids of different sizes.



You might find it helpful to use cubes to make these pyramids first.

## Questions

1. In the pyramid which is 3 blocks high, how many blocks are needed all together?
2. How many blocks would you need to make a pyramid that was 4 blocks high?
3. How many would be needed to make the pyramid 5 blocks high?
4. Fill in the table below.

Height of pyramid	1 block	2 blocks	3 blocks	4 blocks	5 blocks	6 blocks
Total number of blocks needed						

## Challenge

Can you work out how many blocks would be needed to make a pyramid 10 blocks high? Check your answer by drawing a diagram like the ones above or making it with cubes.

How many blocks would be needed to make a pyramid 20 blocks high? How do you know?

# Making Pyramids Answers

1. 14

2. 30 (14 + 16)

3. 55 (30 + 25)

Height of pyramid	1 block	2 block	3 block	4 block	5 block	6 block
Total number of blocks needed	<b>1</b>	<b>5</b>	<b>14</b>	<b>30</b>	<b>55</b>	<b>91</b>

## Challenge

10 blocks high = **385**

20 block high = **2870**