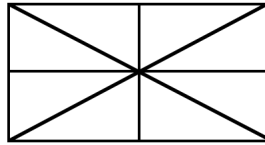


Sample of HSFOL Problems – Year 8

1. What comes next in this number pattern? 28, 1, 21, 4, 15, 9, 10, ____

2. How many triangles of all sizes are in this diagram?



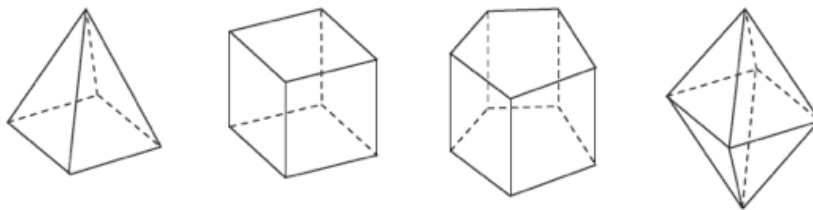
3. What is the last digit in the product of 3^{17} and 2^{17} ?

4. If two bricklayers lay 1800 bricks in six hours, how many bricks would three bricklayers lay in four hours if they worked at the same rate?



5. Judy picked four numbers out of a hat and their average or mean was 17. If three of the numbers were 12, 15, and 27, what was the fourth number?

6. Name two of the 3D figures below that are of the same type.



7. If a cube with an edge of six centimetres is painted red and then cut into small one-centimetre cubes, how many of these small cubes would have no paint on them?



8. A shirt was advertised for \$95.50, but I was given a discount of 10 percent. How much GST, which is 10%, would be included in the price I paid for the shirt?

9. A bag contained 18 blue marbles, 12 red marbles, and 15 yellow marbles. If a second bag contained a total of 135 of the same coloured marbles in the same ratio, how many yellow marbles would it contain?



10. A shipping container has a volume of 99.225 cubic metres. If its length is 10.5 metres and its width is 3.5 metres, how high is it?