

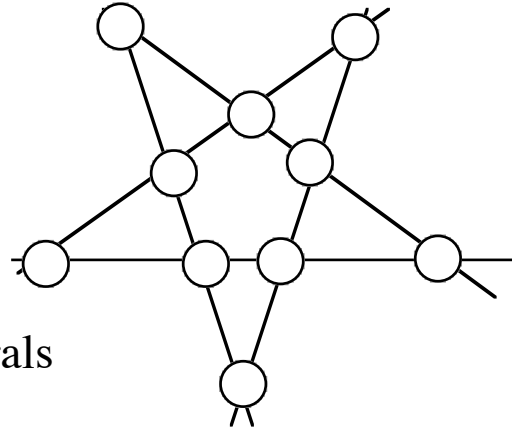
Six Of The Best!

The Answers

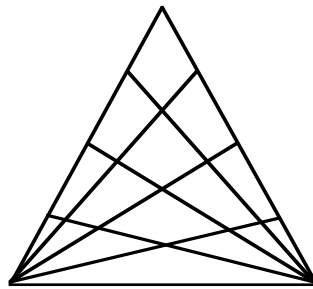
1) $2^{16} - 2^{15} - 2^{14} - 2^{13} - 2^{12} - 2^{11} - 2^{10} - 2^9 - 2^8 - 2^7 - 2^6 - 2^5 - 2^4 - 2^3 - 2^2 - 2^1 = 2$

2) The arrangement below shows 10 coins in 5 rows of five:

Think of this picture as a pentagon inside a 5-pointed star.



3) How many triangles and quadrilaterals are there in this diagram?



64 Triangles
36 Quadrilaterals

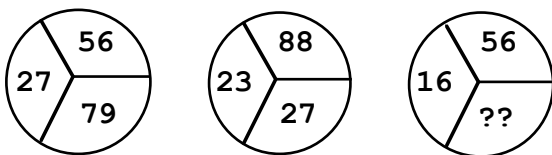
Total: 100 shapes.

4) I am thinking of two numbers. When I add them up I get 12, but when I multiply them together I get 22. Find the two numbers as accurately as you can. I made the answers (roughly):

9.741657386773941385627040173858 and
2.258342613226058614372959826142

5) A 1-metre stick is broken into two pieces at random. What is the length of the shorter piece, on average? 25 cm (Obvious, really!)

6)



?? = 24

The left number multiplied by 5 gives the total of the other two:
 $27 \times 5 = 56 + 79$
 $23 \times 5 = 88 + 27$

So $?? = (16 \times 5) - 56 = 24$.

Many thanks to all of you who entered. Sorry you can't all win! Please try again next year....