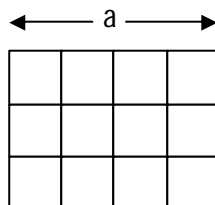


# Weekly Quiz

## Questions:

Week 3 – Solutions to the maths office by Thursday 23<sup>rd</sup> September

1. I am going to paint the six faces of a cube but I want to ensure that no two adjacent faces (i.e. two which share an edge) are the same colour. What is the least number of colours I shall need?
2. What is the difference between the largest and the smallest of these numbers?  
0.89            0.9            0.17            0.72            0.730
3. I am 48 years, 48 months, 48 weeks, 48 days and 48 hours old. What is my age in completed years?
4. Is 123456789987654321 divisible by 3? Is it divisible by 9?
5. Jack said "I'm in the prime of my life, but I must admit that two years ago I was also having a prime year".  
Tom said "I know that six years ago you were just an odd square".  
Jack can vote but is not collecting his old age pension. How old is he?
6. The diagram shows a rectangular wire grid which forms twelve small squares. The length of the grid is  $a$ . What is the total length of wire required to make the grid?



# Weekly Quiz

## Solutions:

Week 3 – 23/09/04

1. 3 colours because of the vertices (corners)
2. Largest number 0.9, smallest number 0.17  
Therefore difference = 0.73
3. 48 years, 48 months, 48 weeks, 48 days and 48 hours – weeks days and hours makes 56.85 weeks; i.e. 1 year and a bit. 48 months is 4 years therefore total 53 years.
4. 123456789987654321 if you add the digits you get 90. Therefore divisible by 3 and 9
5. Primes 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31

This year Jack is 31, 2 years ago I was 29 and six years ago 25

6. Total wire needed

$$5\left(\frac{3}{4}a\right) + 4(a) = \frac{31}{4}a$$