

Weekly Quiz

Questions:

Week 1 – Solutions to the maths office by Thursday 9th September

1. My sister thinks she can count up to 100 but she gets confused between nineteen and ninety and hence jumps from nineteen to ninety one. How many numbers does she miss out?
2. On a clock face, what is the angle between the hands at half past two?
3. Write down $1 + \frac{1}{1 + \frac{1}{3}}$ as a decimal.
4. A bottle of orange squash can be used to make 60 glasses when it is diluted in the ratio 1 part of squash to 4 parts of water. How many glasses would it make if it were diluted in the ration of 1 part of squash to 5 parts of water?
5. One class of 30 students averaged 52 on an exam. Another class of 25 students averaged 30 on the same exam. What was the average score of all 55 students?
6. Mr Micklefield is a compulsive gardener. He has planted his trees in rows, which form a perfect square. After forming a large square he finds that 46 trees are still unplanted. He then goes and buys 13 more trees and forms a new square, using all the unplanted trees, one row larger than the previous square. How many trees has he planted altogether?

Weekly Quiz

Solutions:

Week 1 – 09/09/04

1. 19 to 91 misses out 71 numbers
2. Half past 2 angle between the hands = $90 + 15 = 105^\circ$
3. $1 + \frac{1}{1 + \frac{1}{3}} = 1 + \frac{1}{\frac{4}{3}} = 1 + \frac{3}{4} = 1.75$
4. 1 squash, 4 water = 5 parts makes 60 glasses so 1 part makes 12 glasses.
1 squash, 5 water = 6 parts. $6 \times 12 = 72$ glasses.
5. 30 students average 52 so total marks 1560
25 students average 30 so total marks 750

$$\text{Therefore average} = \frac{2310}{55} = 42$$

6. $46 + 13 = 59$ therefore trees added as below.

1	29
29	

$$\text{Total trees} = 30 \times 30 = 900$$