June Daily Tasks Days 1 - 7

1. Work out each of these:

a) $\frac{2}{3} + 2\frac{4}{5} \div 1\frac{3}{4}$ b) $\frac{5}{9} \div 1\frac{2}{3} + \frac{7}{8}$ c) $\frac{11}{12} - \frac{4}{9}$ of $1\frac{3}{8}$ d) $\frac{5}{6} + (1\frac{1}{8} \times 1\frac{1}{3})^2$

2a) The price of a house is expected to increase at the rate of 4% per year for each of the next 3 years.
It is valued at £124 000 today. Work out its value in 3 years time.

2b) Another house is valued at £165 000 and its value is expected to decrease at the rate of 3.5% per year for each of the next 4 years.
Work out its value in 4 years time.

3. Find the gradients and equations of the lines joining each pair of points below.

a) P(3,7) ; Q(2,3) b) C(-3,1) ; D(-2,9) c) R(6,-4) ; S(2,8) d) G(-4,5) ; H(2,3)

4. Multiply out the brackets in each expression and simplify.

a) $(x-2)(x+5)(x+3)$ b) $(x+4)(2x^2+3x-2)$ c) $(x+2)+3(x-4)(x-2)$

5. Fully factorise each of these expressions:

a) $x^2 - x - 30.$ b) $a^2 + 4x - 12$ c) $2x^2 - 8$ d) $3x^2 - 13x - 10$

6. A travel firm decreased its onboard baggage allowance by 10%. Passengers are now allowed to carry on 27kg.
What is the maximum weight they could have carried onboard before this change?

7. Solve each inequality below:

a) $5(x-2) < 8x + 11.$ b) $2x + 7 > 4 + (5x - 9)$ c) $18 - (4x + 3) \leq 2x + 9$