Homewonk 24

Hand in: _____

Do not use a calculator for questions 1-10. You must show all of your working out. You may need to look up definitions or ask for some extra help either at home or at school for some of these questions.

1. Simplify the expression,
 	
   $2xy + 5xy - 3yx$
	2. Expand the bracket and simplify;
	
	   $2(2x + 7) - x$

3. Find the value of the expression when a = 4 and b = 9
 	
   $(a + b)^2$
	4. Write a set of 5 numbers which have a mean of 6 and a range of 4
	
	   ____, ____, ____, ____, ____

5. If $\frac{9}{4}$ of an amount is 63. What is the amount?	6. Equivalent FDP. Fill in the missing values. <table><tr><th>Fraction</th><th>Decimal</th><th>Percentage</th></tr><tr><td></td><td>2.06</td><td></td></tr></table>
7. Find 37.5 % of 80	8. Share £105 in the ratio 10 : 5.
9. A baker uses 250g of sugar to make a cake. If he has 1.5kg of sugar how many cakes can he make?	10. Work out the value of; $2 \times 9 + 3 - (16 - 9)^2$

Gold:

List the first 10 triangle numbers (You will need to look these up. The internet is your friend for this.)

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What happens when you add adjacent pairs of triangle numbers? (Adjacent means next to)

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Research and write down a fact about triangle numbers.

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Silver:

On the grid below circle the prime numbers. The easiest way to do this is to circle the first number in a times table and then cross out all the other numbers in the times table. Eg for the two times table circle the 2 and the cross out 4,6,8,10 etc then repeat for the three times table and so on.
What do you notice?

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1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30
31	32	33	34	35	36
37	38	39	40	41	42
43	44	45	46	47	48
49	50	51	52	53	54

Bronze:

List the first 12 square numbers

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Find pairs of square numbers that add up to a third square number

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………………………………………………………Year Booklet…………