# Homework 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;<br><br>    2c + 8d – c + 3e – 4d | 2.  Expand the bracket by multiplying out;<br><br>    2(3x +y) |
|---|---|
| 3.  Substitute the values a= 4 and  b = 7 into the expression,<br><br>    100 - ab | 4. Find the median, mode and range for this list of data<br>    3,  0,  12,  2,  8<br><br>Median<br>Mode<br>Range |

| 5. Calculate $$\frac{7}{12} \ of \ 60$$ | 6. Write the ratio below in its simplest form. $$2 : 10 : 6$$ |
|---|---|
| 7. Equivalent FDP. Fill in the gaps <br><br> | Fraction | Decimal | Percent | <br> | | | 12% | | 8. Find 7% of 240 |
| 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. Calculate; $$2 \times 5 + 3 \times 7$$ |

# Gold:

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

| 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 |

What do you notice?

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# Silver:

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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# Bronze:

When we add, subtract, multiply and divide combinations of odd and even numbers the outcomes are always odd or even for that combination.  Fill in the blanks with either odd or even.  The first one is done for you:

Even + Even = <u>Even</u>          Even x Even = _____

Even + Odd = _____          Even x Odd = _____

Odd + Odd = _____          Odd x Odd = _____

Even  - Even = _____          Even ÷ Even = _____

Even – Odd = _____          Even ÷ Odd = _____

Odd – Even = _____          Odd ÷ Odd = _____

Odd – Odd = _____