

5. (a) What is 1455 rounded off to the nearest 10? \_\_\_\_\_  
 (b) What is 1455 rounded off to the nearest 100? \_\_\_\_\_  
 (c) What is 1455 rounded off to the nearest 1000? \_\_\_\_\_

6. If you know that  $85 \times 3 = 255$ , show how you would use that information in order to work out  $285 \times 3$ ?

$285 \times 3 =$  \_\_\_\_\_

7. From the following list of numbers:

- 29      31      40      42      48      63      64      81

List all the numbers that are:

- (a) Prime Numbers \_\_\_\_\_  
 (b) Square Numbers \_\_\_\_\_  
 (c) Multiples of 7 \_\_\_\_\_  
 (d) Factors of 480 \_\_\_\_\_

8. Draw a line from each of the expressions on the left to the equivalent expression on the right:

- |               |           |
|---------------|-----------|
|               | 12        |
|               | $w + 12$  |
| $(w+5)+(w-7)$ | -2        |
|               | $2w + 12$ |
| $(w+5)-(w+7)$ | $w-2$     |
|               | $2w-2$    |

9. Rachel says:

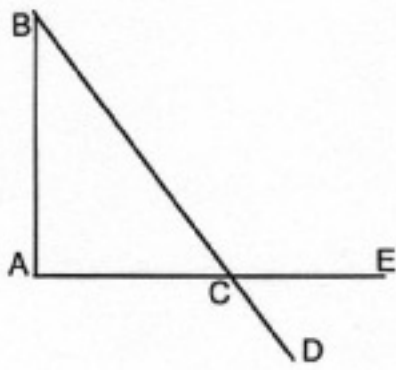
***"Every multiple of 5 ends in 5."***

Is she right? Explain why.

\_\_\_\_\_

\_\_\_\_\_

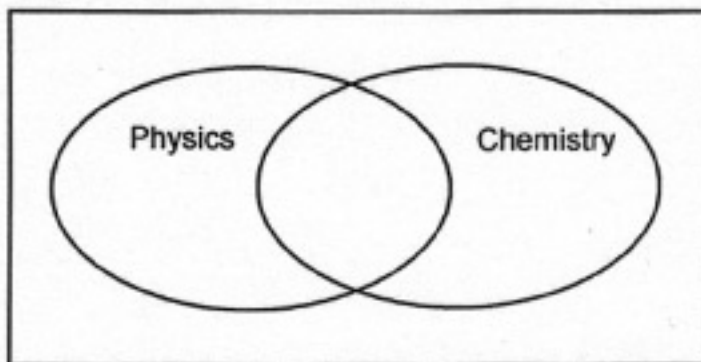
Look carefully and the following figure and then answer the questions below:



82. If AB is 12 and BC is 15, what is the length of AC? \_\_\_\_\_

83. If angle ABC is  $30^\circ$ , what is the size of angle ECD? \_\_\_\_\_

There are 30 students in a class. Of these 14 study physics, 16 study chemistry and 5 study neither physics nor chemistry. Use the diagram below to help you answer the questions.



84. How many students study both physics and chemistry? \_\_\_\_\_

85. What percentage of students in the class study either physics or chemistry, but not both (to 2d.p)? \_\_\_\_\_

Re-write the following formulae

86.  $v^2 - u^2 = 2as$   
in the form  $u =$  \_\_\_\_\_

87.  $a = \pi r^2$   
in the form  $r =$  \_\_\_\_\_

88.  $i = p \times t \times r / 100$   
in the form  $p =$  \_\_\_\_\_

89.  $s = ut + at^2/2$   
in the form  $a =$  \_\_\_\_\_

90. What are the prime factors are common to the numbers 72 & 84?  
\_\_\_\_\_

The result of the calculation  $27249 \div 17$  is shown as **1602.882353** on a calculator. What would the answer be : \_\_\_\_\_

91. Correct to three significant figures  
\_\_\_\_\_

92. Correct to four decimal places  
\_\_\_\_\_

93. In standard form correct to five significant figures  
\_\_\_\_\_

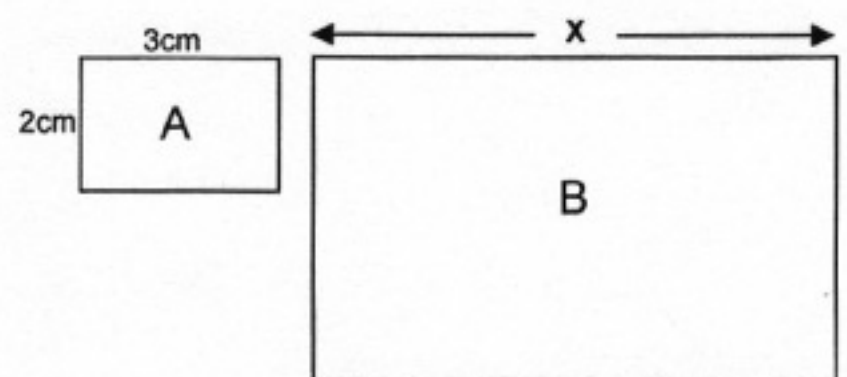
**Multiply out & simplify** where possible

94.  $3x(x^2 - 4x + 1)$   
\_\_\_\_\_

95.  $(3x - 4)(5x + 2)$   
\_\_\_\_\_

96.  $(5x - 3)(x - 6)$   
\_\_\_\_\_

The two rectangles, A & B, below are **similar**. The ratio of their heights is 5 : 2



97. What is the length of X in rectangle B  
\_\_\_\_\_

98. What is the ratio of Area A : Area B  
\_\_\_\_\_

In a class there are 14 girls and 12 boys. A child is selected at random. What is the probability that:

99. A girl is selected \_\_\_\_\_

100. The oldest boy is selected \_\_\_\_\_

16. This is a table of the distances between some towns in the UK.  
Distances are measured in km.

Aberdeen								
513	Bristol							
473	171	Cambridge						
595	206	124	Dover					
587	83	250	244	Exeter				
482	54	153	224	128	Hereford			
279	236	252	355	310	204	Kendal		
328	219	147	272	294	188	72	Leeds	
388	185	94	219	259	153	177	142	Lincoln

Tom is using the chart above to find out information for his mum about their coming holiday to Scotland. Tom lives in Hereford.

(a) Tom's mum tells him they are going to Aberdeen by car and it is approximately 500km, is she right?

\_\_\_\_\_

(b) What is the distance by the chart from Hereford to Aberdeen?

(c) On their way to Aberdeen they will visit Tom's uncles in Leeds. So the journey will be from Hereford to Leeds, then from Leeds to Aberdeen. What is the total distance?

\_\_\_\_\_

(d) After the holiday they will drive straight back to Hereford. What is the total distance of their journey?

\_\_\_\_\_

17. Bob is making a fruit salad.  
For every banana he uses, he uses 2 oranges and 3 apples.

(a) One day, he uses 24 pieces of fruit altogether. How many oranges does he use?

\_\_\_\_\_

(b) On another day, he wants to use up all of the 10.5 apples he has.  
How many oranges and bananas does he need?

Oranges = \_\_\_\_\_

Bananas = \_\_\_\_\_



10. A school has a sports day. The winner of each event scores 10 points. This chart shows the points scored by each team.

Event	Red	Green	Blue	Yellow	White
100m	8	6	2	10	4
Long Jump	10	2	6	4	8
Relay	4	6	8	10	2
High Jump	8	2	10	6	4

(a) How many events did the yellow team win? \_\_\_\_\_

(b) Which team came second in the relay? \_\_\_\_\_

(c) Which team won overall? \_\_\_\_\_

(d) Which team came last twice? \_\_\_\_\_

11. Work out the following:

(a)  $\frac{5}{8}$  of 840

\_\_\_\_\_

(b) 80% of 475

\_\_\_\_\_

(c)  $\frac{7}{12}$  of 396

\_\_\_\_\_

12. A sequence of numbers starts at 11 and follows the rule:  
"double the last number and then subtract 3"

**11, 19, 35, 67, 131, ...**

The number 4099 is in the sequence.

Calculate the number that comes immediately BEFORE 4099.

\_\_\_\_\_