

YOUR NAME : _____

Summer Examination Revision 2024

Exams start Monday 10th June 2024

Lesson 5

5.5 Exercise

Question 1

(a) (i)

Divide £36 in the ratio 4 : 5

(ii)

Divide \$42 in the ratio 3 : 4

[5 marks]

(b) Cancel down these fractions;

(i) $\frac{3}{12}$

(ii) $\frac{8}{20}$

(iii) $\frac{12}{30}$

(iv) $\frac{26}{39}$

[10 marks]

(c) Simplify these ratios;

(i) 2 : 22

(ii) 9 : 15

(iii) 3 : 6 : 9

(iv) 6 : 15 : 18

[10 marks]

Question 2

Here is a table of squares;

x	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
x^2	1	4	9	16	25	36	49	64	81	100	121	144	169	196	225	256	289	324	361	400

(a) On the table circle where it tells you that;

(i) $6^2 = 36$

(ii) $\sqrt{81} = 9$

[2 marks]

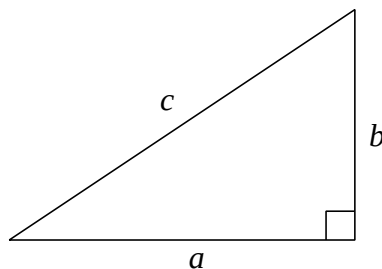
(b) Use the table to write down the value of;

(i) 19^2

(ii) $\sqrt{196}$

[2 marks]

(c) The official GCSE formula sheet gives the Theorem of Pythagoras as;



$$a^2 + b^2 = c^2$$

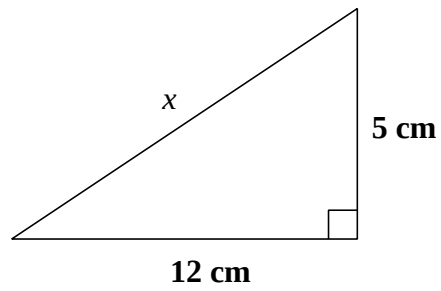
(i) If $a = 8$ and $b = 15$, calculate c

[8 marks]

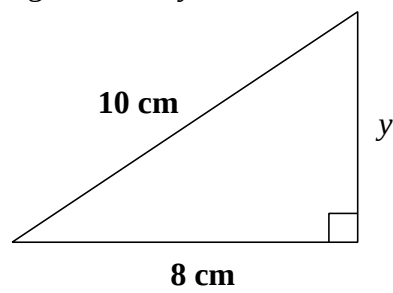
(ii) If $a = 16$ and $c = 20$, calculate b

[8 marks]

- (d) Calculate the length marked x



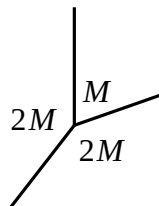
- (e) Calculate the length marked y



[10 marks]

Question 3

Determine angle M ;



[10 marks]

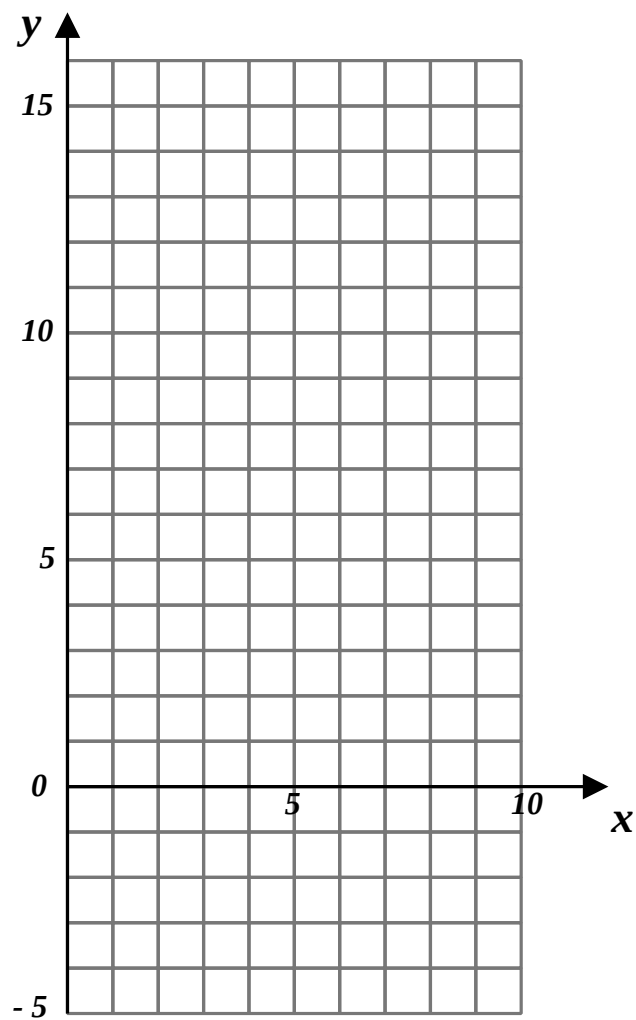
[5 marks]

Question 4

(a) Complete this table

x	0	1	2	3	4	5	6	7	8	9	10
$y = 0.5x + 6$				7.5							

(b) Use your table to plot the line with equation $y = 0.5x + 6$



[10 marks]

Question 5

(a) Expand the brackets;

$$(x + 8)(x - 3)$$

[5 marks]

(b) The opposite of *expanding the brackets* is *making brackets*.

Try to puzzle what must be in these brackets;

(i)

$$x^2 + 8x + 7 = (\quad + \quad) (\quad + \quad)$$

[5 marks]

(ii)

$$x^2 + 7x + 10 = (\quad + \quad) (\quad + \quad)$$

[5 marks]

(iii)

$$x^2 + 10x + 9 = (\quad + \quad) (\quad + \quad)$$

[5 marks]