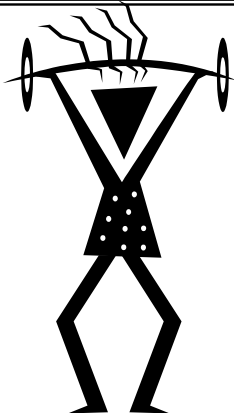


# Mathsercise

Revision Practice  
for Target C grade  
GCSE Algebra





Solve the equation...

$$8x - 3 = 21$$



Solving Equations **1**

Solve the equation.....

$$4(3n + 7) = 16$$



Solving Equations **2**

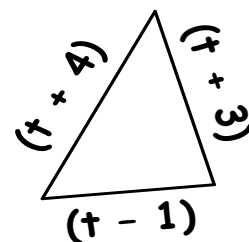
Solve the equation...

$$4(x + 2) = 6x + 4$$



Solving Equations **3**

The perimeter of this triangle is 39cm



Find the value of  $t$



Solving Equations **4**



Solve the equation...

$$4x - 9 = 13$$



Equations 2 **1**

Solve the equation.....

$$15r - 4 = 7r + 12$$



Equations 2 **2**

Solve the equation...

$$6 - 5x = 2(2x - 6)$$



Equations 2 **3**

Solve.....

$$x + 3y = 13$$

$$3x + 2y = 4$$



Equations 2 **4**



Simplify the expression.....

$$4p + 9q + 5p - 3q$$



Expressions **1**

Simplify the expression...

$$5p^2 + 3q - p^2 + 2q$$



Expressions **2**

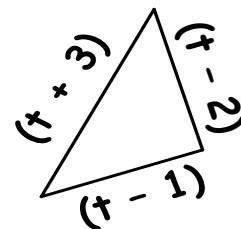
Multiply out.....

$$6(4x - 3)$$



Expressions **3**

Find the perimeter of this shape...



Expressions **4**



Simplify the expressions.....

i)  $x + y + x + y + x$

ii)  $4d + 5e - 3d - 2e$



Expressions 2 **1**

Expand and simplify.....

$$2(4a + 2) - 3(2a - 4)$$



Expressions 2 **2**

Simplify.....

i)  $r^2 + r^2 + r^2$

ii)  $3q^2 - q^2$



Expressions 2 **3**

Simplify.....

i)  $3a^2b \times 7ab^3$

ii)  $\frac{(x + 2)^2}{(x + 2)}$



Expressions 2 **4**



Factorise.....

$$12x + 4$$



Factorising **1**

Factorise ....

$$6x + 18y$$



Factorising **2**

Factorise.....

$$8xy + 12x$$



Factorising **3**

Factorise.....

$$6x^2 - 3xy$$



Factorising **4**



Use Trial and Improvement to solve..

$x^3 + 2x = 50$  to 1 d.p (x lies between 3 and 4)

x	$x^3 + 2x$	Big/small
3	$27 + 6 = 33$	Too small
4		



Using Formulae **1**

Use Trial and Improvement to solve..

$\frac{1}{2}x^3 - x = 90$  to 1 d.p (x lies between 5 and 6)

x	$\frac{1}{2}x^3 - x$	Big/small



Using Formulae **2**

Find the value of....

a)  $t^2 - 4t$  when  $t = 3$

b)  $p^2 - 3p$  when  $p = -4$



Using Formulae **3**

If  $P = q^2 - 5q$ .....

a) Find P when  $q = -2$

b) Find P when  $q = \frac{1}{2}$



Using Formulae **4**



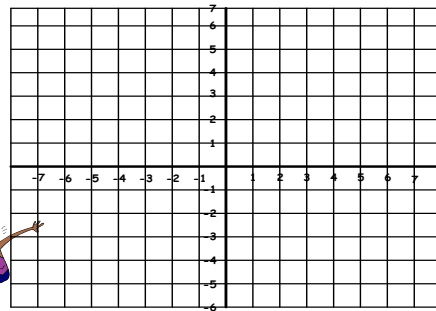
Complete this grid for the function  $y = 3x + 1$

x	-3	-2	-1	0	1	2	3
y			-2			7	



Graphs **1**

Use the grid box from Q1 to plot and draw the graph of  $y = 3x + 1$



Graphs **2**

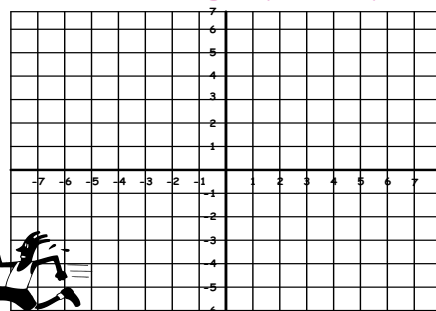
Complete this grid for the function  $y = 2x - 5$

x	-3	-2	-1	0	1	2	3
y		-9			-3		



Graphs **3**

Use the grid box from Q3 to plot and draw the graph of  $y = 2x - 5$



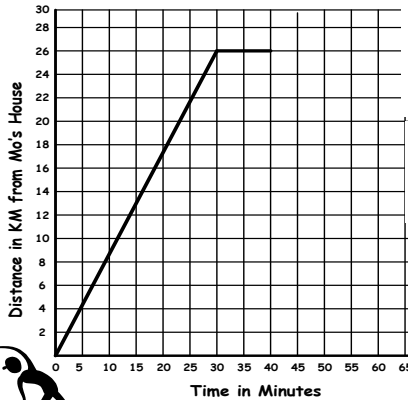
Graphs **4**





# Mathsercise-C

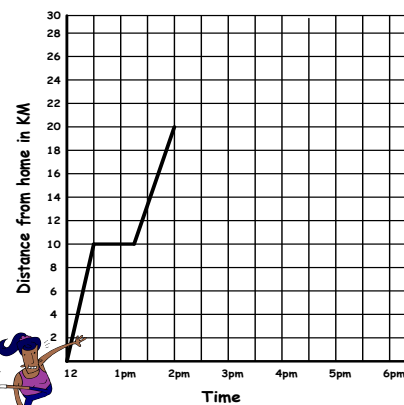
## Graphs 2



This is part of a travel graph of Mo's journey from his house to the Sports Hall and Back

- i) Work out Mo's speed for the first 30 minutes of his journey.
- ii) Mo spent 10 Mins at the Sports Hall and then travelled home at 60km/h. Complete the travel graph

Graphs 3 **1**



A girl left home at 12 noon to go for a cycle ride. The graph shows part of the journey.

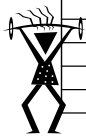
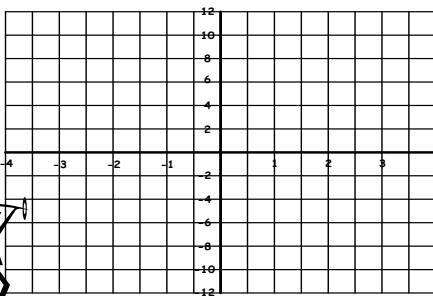
- i) At 12.30pm, the girl stopped for a rest - for how long?
- ii) The girl stopped for another hour at 2pm, then she cycled home and it took her 1hr 30 mins. Complete the travel graph.

Graphs 3 **2**



Complete the table of values for  $y = x^3 + x - 2$ , and plot the graph

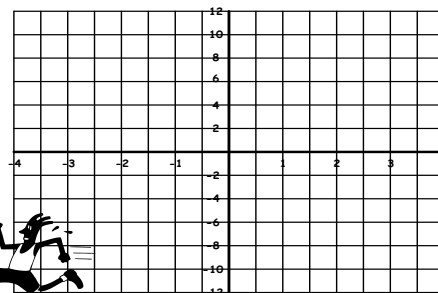
x	-2	-1	0	1	2
y	-12			0	



Graphs 3 **3**

Complete the table of values for  $y = \frac{1}{2}x^3 + 2x - 5$ , and plot the graph

x	-2	-1	0	1	2
y			-5		



Graphs 3 **4**



If  $-2 < m \leq 4$  and  $m$  is an integer.....

Write down all of the possible values of  $m$



Inequalities **1**

Given  $-3 \leq p < 2$  and  $p$  is an integer....

Write down all of the possible values of  $p$



Inequalities **2**

Solve the inequality...

$$2x + 7 > 1$$



Inequalities **3**

Solve the inequality .....

$$3y - 6 < 15$$



Inequalities **4**



Factorise.....

a)  $x^2 + 2x$

b)  $y^2 - 6y$

c)  $8x^2 - 20xy$



Quadratics **1**

Expand these brackets.....

a)  $7(x + 3)$

b)  $x(x + 3)$

c)  $2y(3y - 5)$



Quadratics **2**

Expand these brackets.....

a)  $(x + 1)(x + 3)$

b)  $(x - 6)(x + 2)$

c)  $(x - 4)(x + 7)$



Quadratics **3**

Factorise.....

a)  $x^2 + 3x + 2$

b)  $x^2 + 7x + 12$

c)  $x^2 + 2x - 15$

d)  $x^2 - 2x - 35$



Quadratics **4**



If  $a = 3$  and  $b = 5$ , find the value of...

$$2a + b$$

$$2ab$$



Substitution **1**

When  $n = 8$ ...

evaluate the expression  
 $3(2n-2)$



Substitution **2**

$$T = 3x + 4y$$

Find the value of  $T$   
when...

$$x = -5 \text{ and } y = 3$$



Substitution **3**

Evaluate  $A = 3(2b - 4)$  when....

$$b = -2 \text{ and when..}$$

$$b = -5$$



Substitution **4**