Year 9

Task 3

Focus for this week: Co-ordinates & midpoints

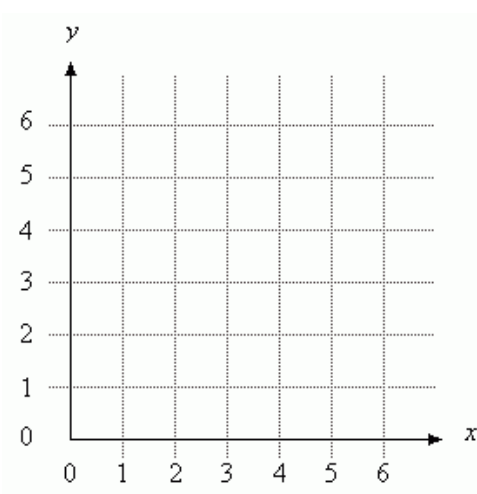| Essential learning:	• Use positive and negative numbers • Continue number patterns
Practising:	• Mark co-ordinates on a one quadrant co-ordinate grid • Drawing shapes on co-ordinate grids
Learning about:	• Positive and negative co-ordinates • Midpoints
Extension:	• Draw a line from an equation like y=3x + 4

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Yr9 Maths w/b 27/4/20: Worksheet 1   Number patterns & simple co-ordinates

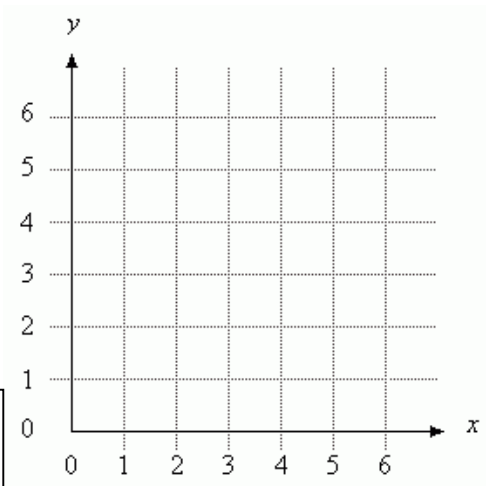Task 1:

Continue the following number patterns:

a)   6, 9, 12, 15, 18, ………., ………., ………., ………., ………., ……….

b)   40, 50, 60, ………., ………., ………., ………., ………., ……….

c)   -1, -2, -3, -4, ………., ………., ………., ………., ………., ……….

d)   -2, -4, -6, -8, ………., ………., ………., ………., ………., ……….

e)   6, 3, 0, -3, ………., ………., ………., ………., ………., ……….

f)   13, 7, 1 , -5, -11, ………., ………., ………., ………., ………., ……….

g)   4, -3, -10, -17, , ………., ………., ………., ………., ………., ……….

Task 2: Make the following shapes on the co-ordinate grid

Square: (1,1)   (4,1)   (1,4)   (4,4)

Triangle: (3,5)   (5,5)   (4,6)

Octagon: (2,5) (3,5) (4,4)   (4,3) (3,2)   (2,2)   (1,3)   (1,4)

Kite: (4,5) (5,6) (6,5) (5,3)

Yr9 Maths w/b 27/4/20: Worksheet 2   Positive and negative co-ordinates

To find a co-ordinate, you travel along the x axis (along the corridor) and then move up or down the y axis (up or down the stairs). We always write co-ordinates inside curvy brackets.

Create the following shapes on the co-ordinate grid below:

Square: (-8, 7) (-7,7) (-8,6) (-7,6)   Triangle: (2,-9) (6,-9) (4,-10)
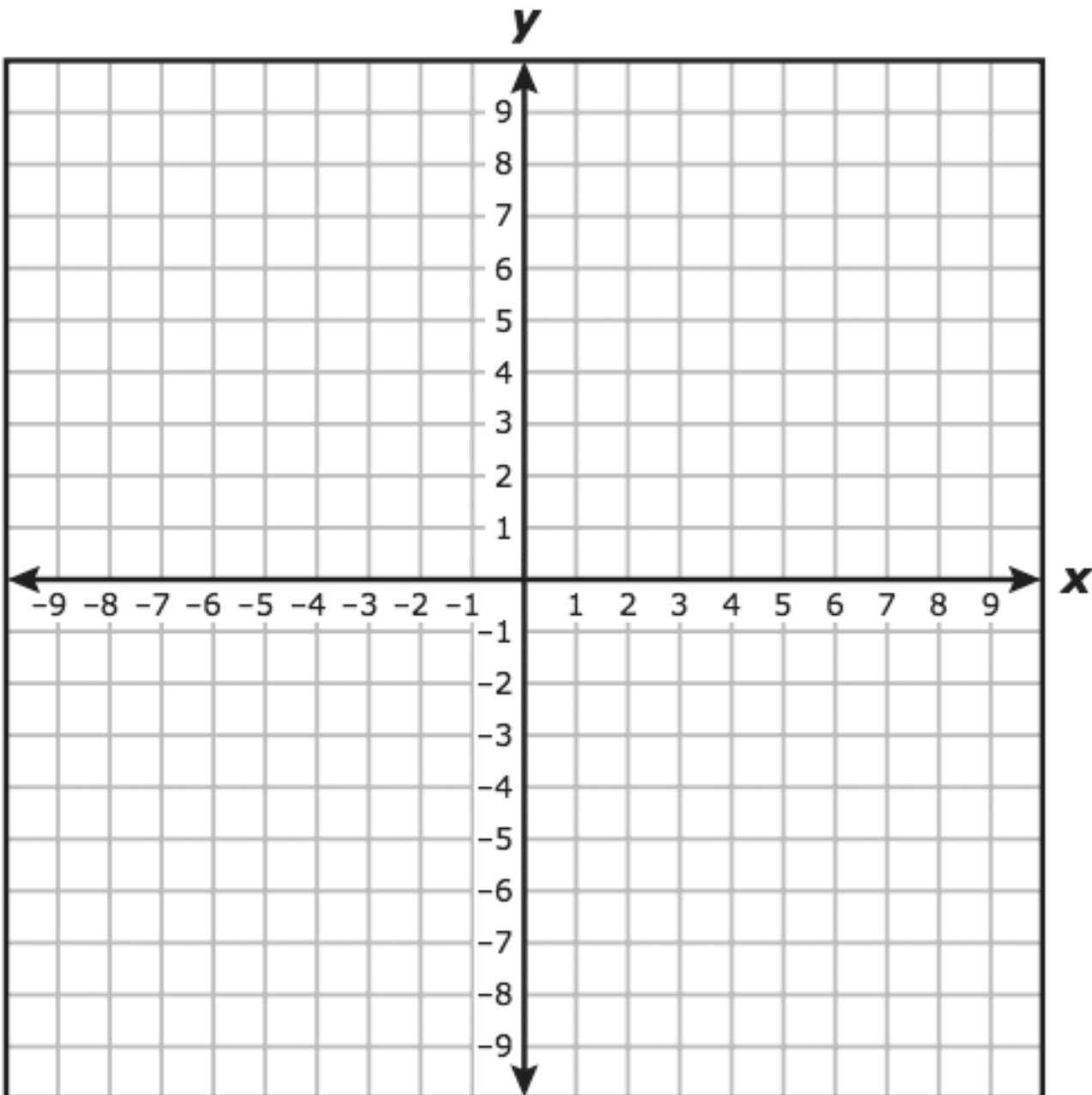
Trapezium: (7,8) (8,8) (9,7) (6,7)   Kite: (6,2) (8,0) (4,0) (6,-5)

Rectangle: (-10, 6) (-10, 4) (-4, 6) (-4, 4)   Parallelogram: (-10, -6) (-9, -4) (-3, -4) (-4, -6)

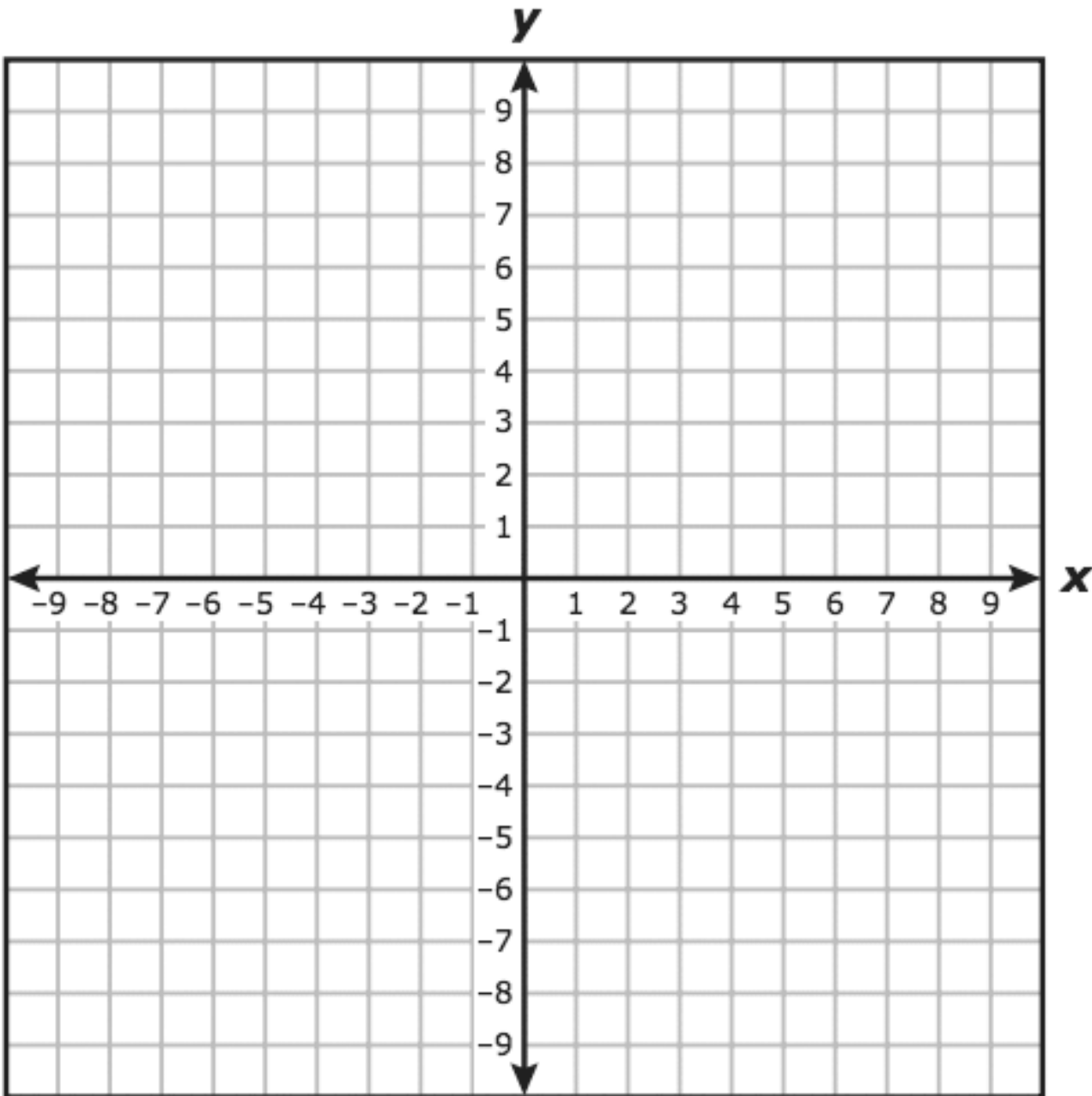Hexagon: (0,0) (-1,0) (-2,-1) (-1, -2) (0,-2) (1,-1)

Yr9 Maths w/b 27/4/20: Worksheet 3   Midpoints

The midpoint of a line is the co-ordinate in the middle of a line.

Put a cross on each of the two points. Join them to make a line. Write down the co-ordinate in the middle of the line in the space provided.

a)   (1,1)   (1,6)   Midpoint = (_____ , _____)

a)   (-8,3)   (-6,3)   Midpoint = (_____ , _____)

a)   (-7,-2) (-5,-4)   Midpoint = (_____ , _____)

a)   (-9,-9) (-5,-7)   Midpoint = (_____ , _____)

a)   (1,9)   (7,7)   Midpoint = (_____ , _____)

a)   (0,0)   (8,-8)   Midpoint = (_____ , _____)

Yr9 Maths w/b 27/4/20: Worksheet 4   Number patterns on a co-ordinate graph

a) Draw a straight line through the points (-6,4) (-2, 4) and (1,4).

b) Write three other co-ordinates that are on this line (___, ___) (___, ___) (___, ___)

c) Draw a straight line through the points (-6,4) (-6, 0) and (-6,-4).

d) Write three other co-ordinates that are on this line (___, ___) (___, ___) (___, ___)

e) Draw a straight line through the points (-6,-6) (-2, -2) and (4,4).

f) Write three other co-ordinates that are on this line (___, ___) (___, ___) (___, ___)

g) Draw a straight line through the points (-5,-1) (-3, -1) and (2,-1).

h) Write three other co-ordinates that are on this line (___, ___) (___, ___) (___, ___)

i) Draw a straight line through the points (8,7) (8, -9) and (8,0).

j) Write three other co-ordinates that are on this line (___, ___) (___, ___) (___, ___)