

# Maths Revision Booklet

for CCEA GCSE 2-tier specification

# M8

*Conor McGurk*

Name:

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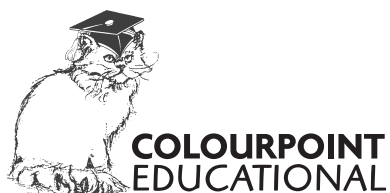
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# Revision Exercise 1A

(non-calculator)



You must **not** use a calculator for this paper. Total mark for this paper is 50.

Figures in brackets printed down the right-hand side of pages indicate the marks awarded to each question or part question.

You should have a ruler, compasses, set-square and protractor.

1. (a) (i) Convert the decimal number 47 into binary.

Answer \_\_\_\_\_ [1]

- (ii) Change the binary number 100101 into decimal form.

Answer \_\_\_\_\_ [1]

- (b) Simplify  $12x^6 \div 3x^4$

Answer \_\_\_\_\_ [2]

2. In a group of 72 children, the ratio of boys to girls is 3:5  
How many boys must join the group to make the ratio of boys to girls 5:3?

Answer \_\_\_\_\_ [5]

3. Change the subject of the formula to  $x$

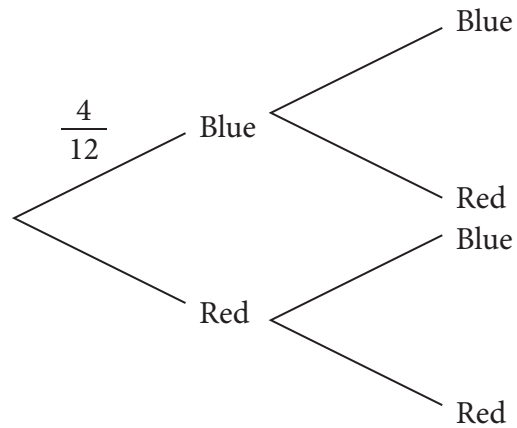
$$xy + 4y = 5y - 4x$$

Answer  $x =$  \_\_\_\_\_ [3]

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4. A bag contains 12 beads, 8 of which are red and the rest are blue.  
Two beads are selected at random from the bag.  
The first bead is selected and is not replaced.  
A second bead is then selected from the bag.

(a) Complete the probability tree diagram below to show the different outcomes.



[2]

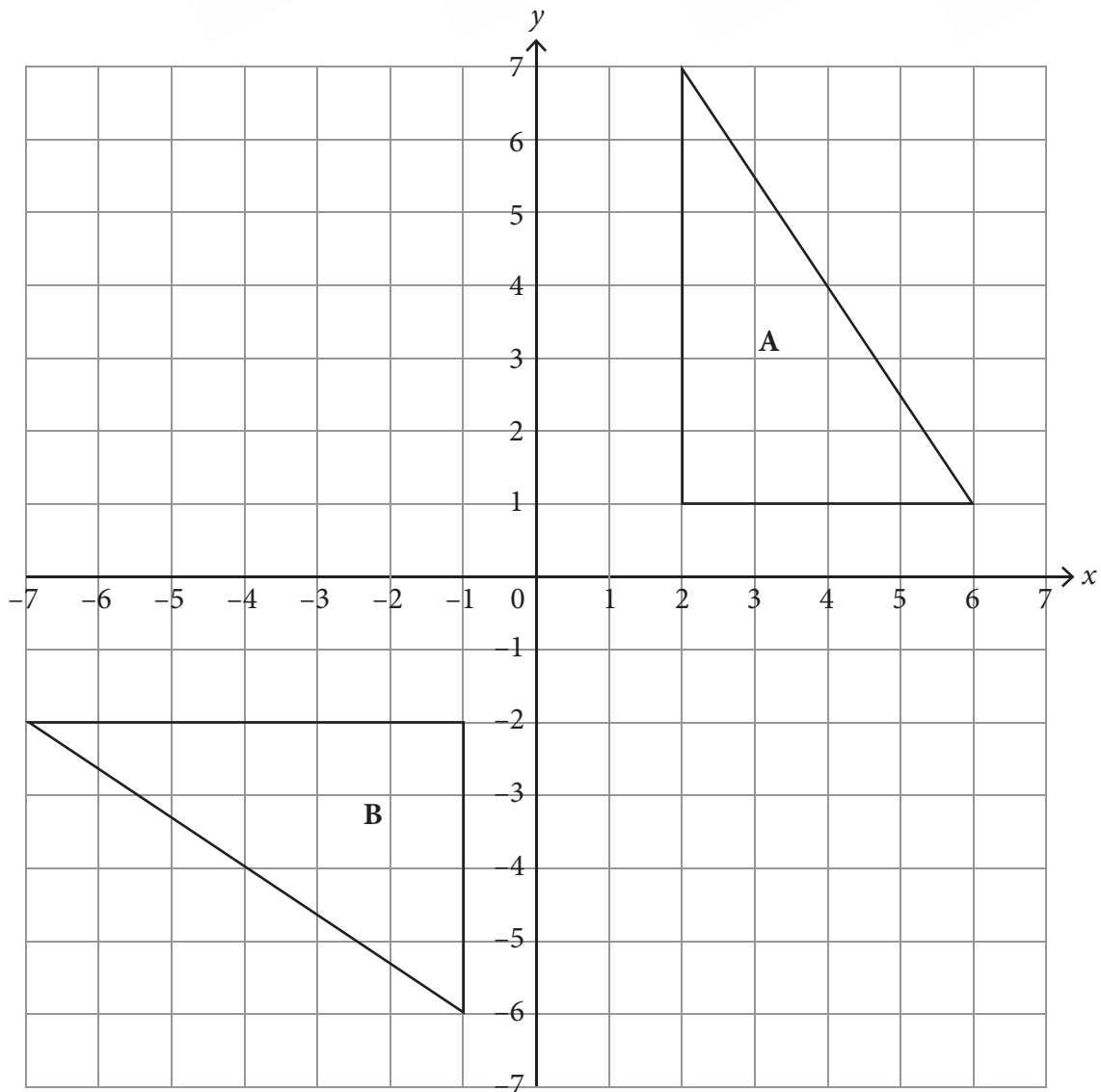
(b) What is the probability of selecting two blue beads?

Answer \_\_\_\_\_ [2]

(c) What is the probability of selecting no blue beads?

Answer \_\_\_\_\_ [2]

5.



(a) Describe the transformation which maps triangle A onto triangle B.

Answer \_\_\_\_\_  
 \_\_\_\_\_ [2]

(b) Rotate shape A by an angle of  $90^\circ$  clockwise about the point (0, 2).  
 Label the image C.

[2]

(c) Enlarge triangle A by a scale factor  $\frac{1}{2}$ , centre (-2, 3).  
 Label the new shape D.

[3]