

**AQA, OCR, Edexcel**

**GCSE**

# **GCSE Maths**

## Venn Diagrams Answers

Name:

**M**

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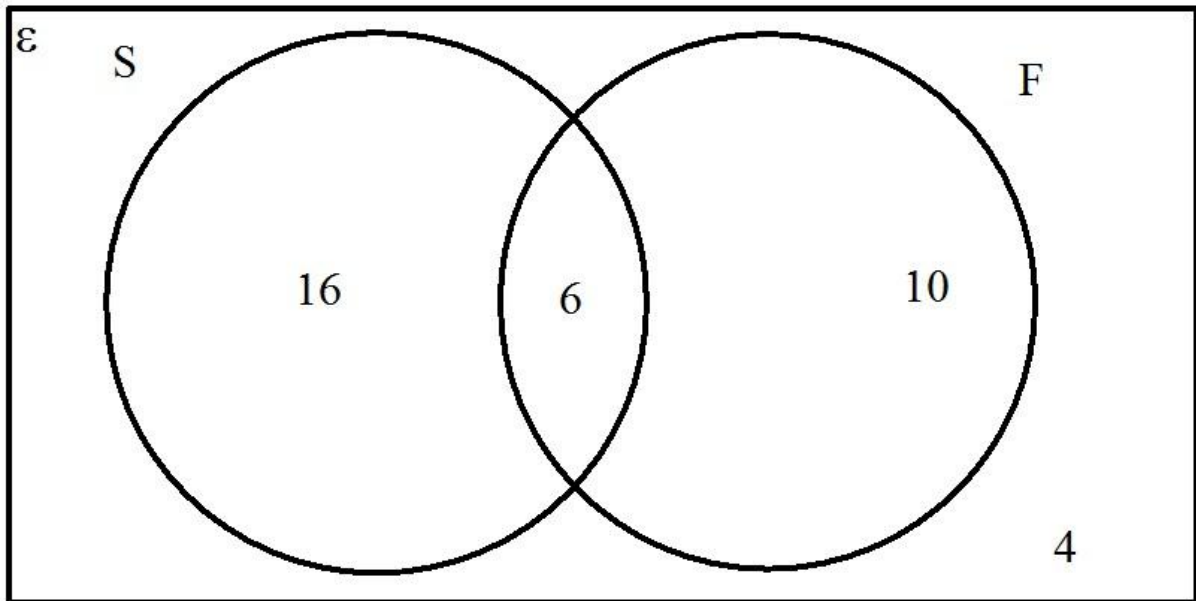
**E**

Mathsmadeeasy.co.uk

Total Marks: /24

## Venn Diagrams

1. The Venn diagram below shows the number of year 9 pupils which selected either French (F) or Spanish (S) GCSE.



Use the diagram to find the probability what a randomly selected pupil is:

- a. Not studying French GCSE

$$\frac{26}{36} = \frac{13}{18}$$

(2 marks)

- b. Not studying either Spanish or French.

$$\frac{4}{36} = \frac{1}{9}$$

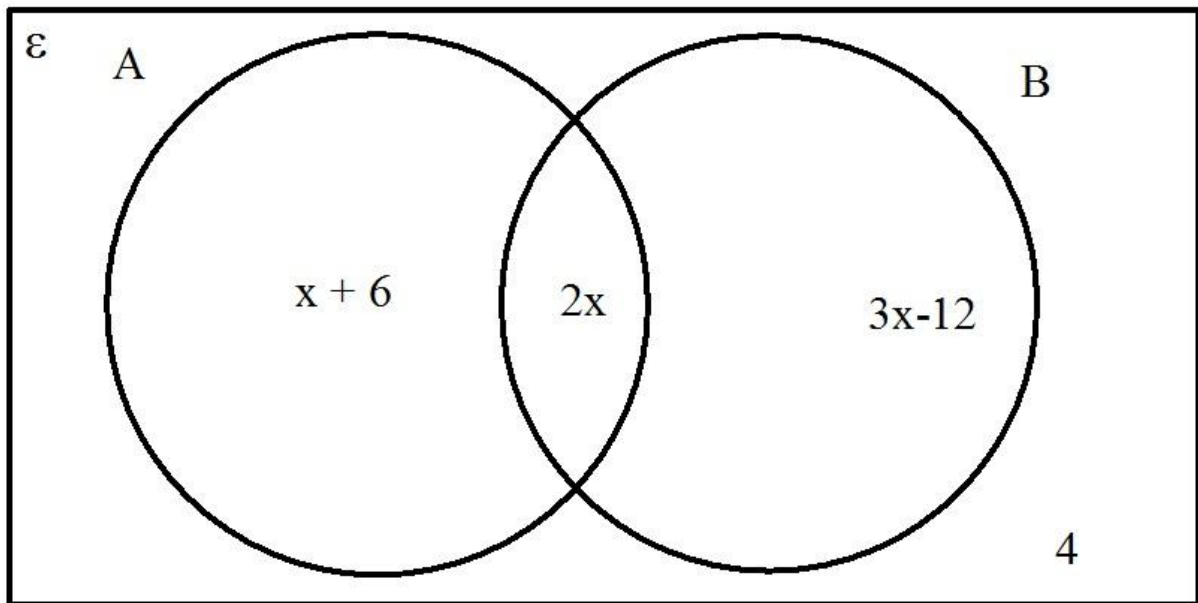
(2 Marks)

- c. Studying both subjects.

$$\frac{6}{36} = \frac{1}{6}$$

(2 Marks)

2. The diagram below shows the number of elements in sets A and B



a. Give that  $(\epsilon) = 64$ , find the value of  $x$ .

$$x = 11$$

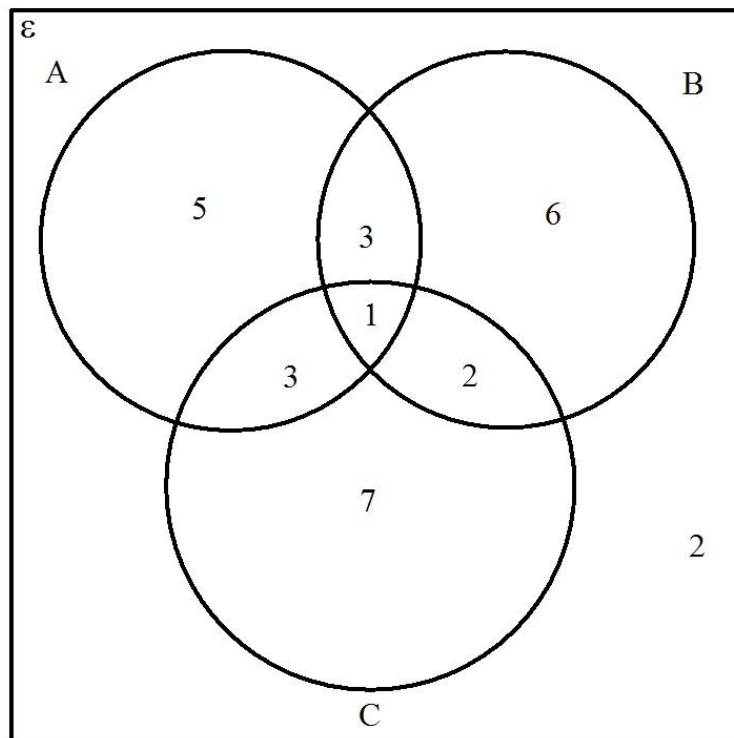
(3 Marks)

b. Find the probability that a randomly selected element is in set A.

$$\frac{39}{64}$$

(2 Marks)

3. The Venn diagram below shows the number of elements in sets A, B and C.



a. Work out the total number of elements?

$$= 29$$

(2 marks)

b. Find the probability that a randomly selected element is in set A.

$$= \frac{12}{29}$$

(1 mark)

c. Find the probability that a randomly selected element is in set A and one other set

$$= \frac{6}{29}$$

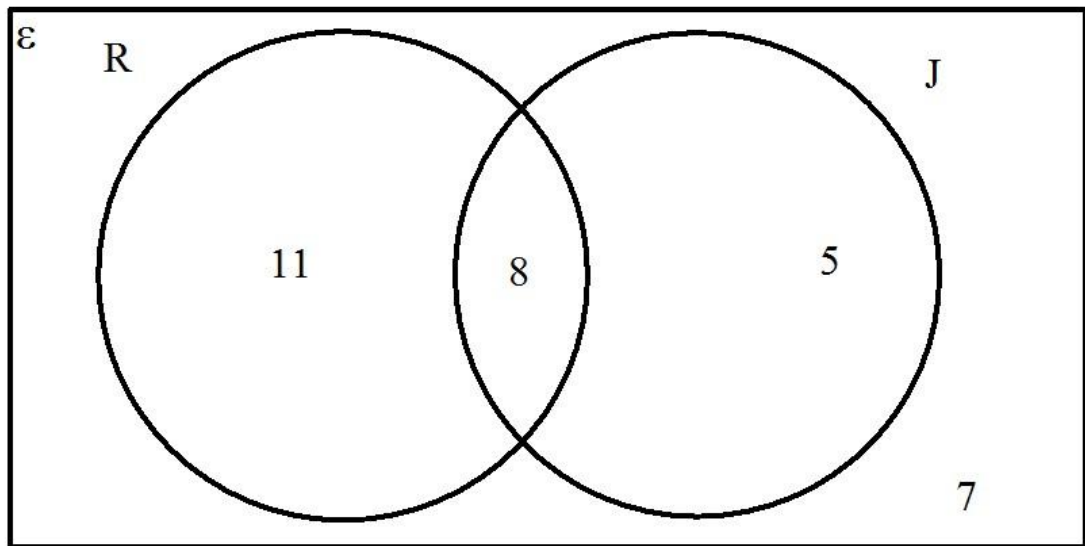
(2 marks)

d. Find the probability that a randomly selected element is in neither set A or B.

$$= \frac{9}{29}$$

(2 marks)

4. Use the Venn diagram to answer the following:



- a.  $R \cup J = 24$
- b.  $R \cap J = 8$
- c.  $R - J = 6$
- d.  $(R \cup J)' = 7$

(6 Marks)