

AQA, OCR, Edexcel

GCSE

GCSE Maths

Venn Diagrams Answers

Name:

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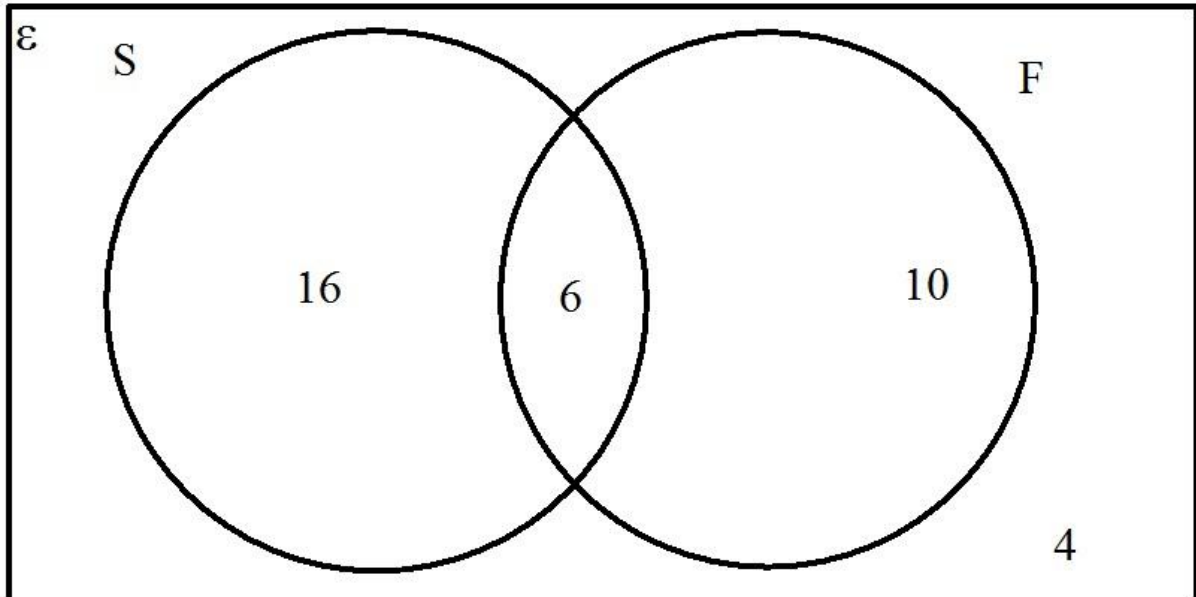
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Total Marks: /24

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

$$\frac{20}{36} = \frac{13}{18}$$

(2 marks)

- b. Not studying either Spanish or French.

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

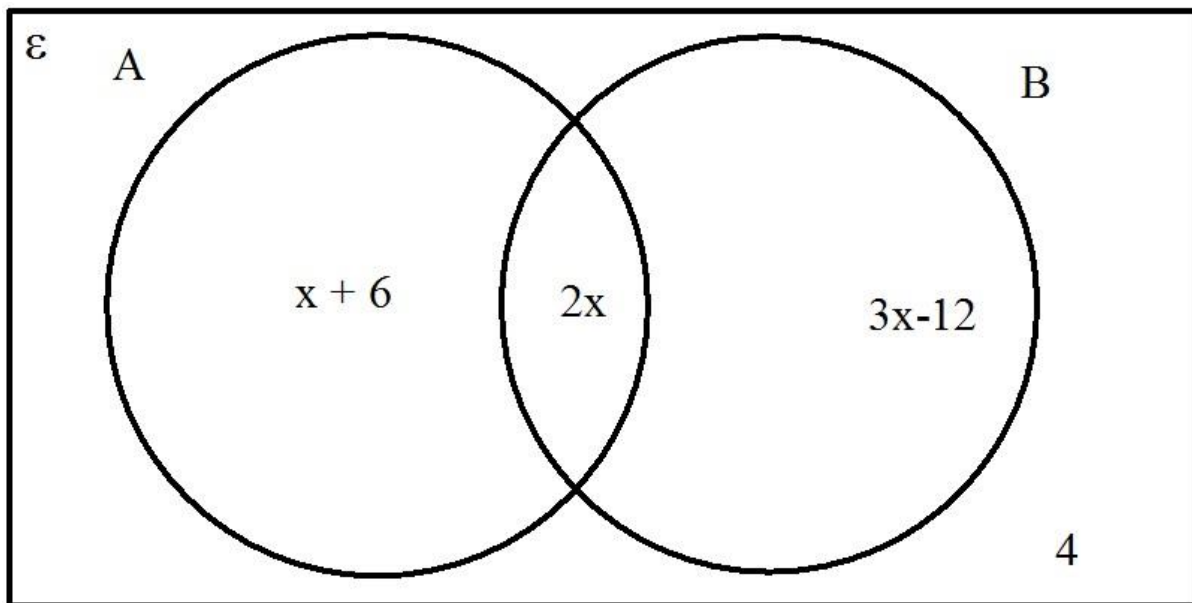
(2 Marks)

- 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 .

$$x = 11$$

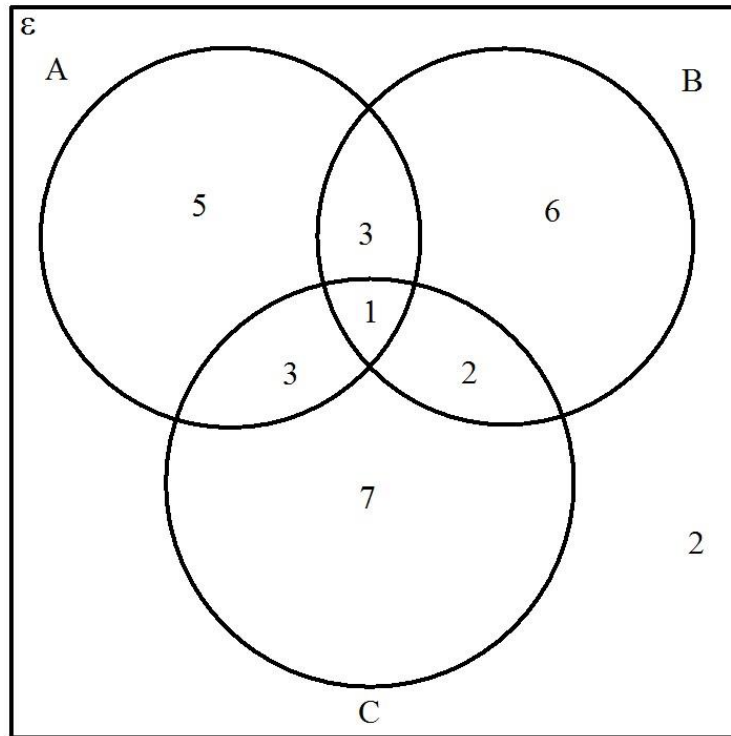
(3 Marks)

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)

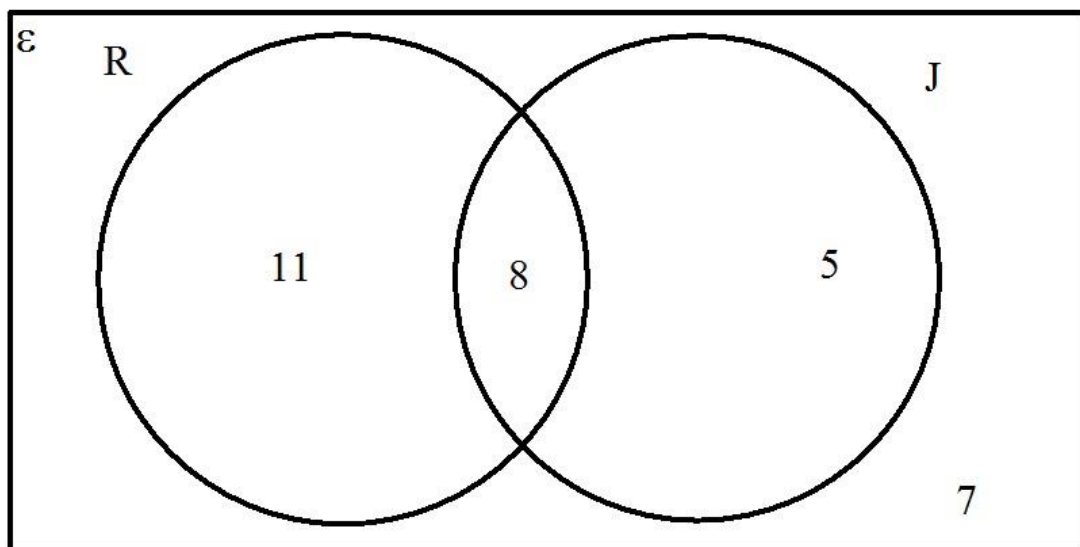
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d. Find the probability that a randomly selected element is in neither set A of B.

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

(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)