

Write your name here

Surname

Other names

In the style of:

Edexcel

International GCSE

Centre Number

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Candidate Number

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Mathematics B

Sets



Past Paper Style Questions
Arranged by Topic

Paper Reference

4MB0/01

You must have: Ruler graduated in centimetres and millimetres, protractor, compasses, pen, HB pencil, eraser, calculator. Tracing paper may be used.

Total Marks

Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided
– *there may be more space than you need.*
- **Calculators may be used.**

Information

The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

- Read each question carefully before you start to answer it.
- Check your answers if you have time at the end.
- Without sufficient working, correct answers may be awarded no marks.

Turn over ►



1. $\mathcal{E} = \{\text{positive even integers}\},$

$$X = \{x : x \leq 14\},$$

$$Y = \{x : x > 8\}.$$

List the members of the set $X \cap Y$.

.....

(2)

(Total for Question 1 is 2 marks)

2. $\mathcal{E} = \{x : x \text{ is a positive integer}\}$

$$X = \{x : x > 4\}$$

$$Y = \{x : x \leq 10\}$$

(a) List the elements of the set $X \cap Y$

.....

(2)

.....

(1)

(b) Write down the value of $n(X')$

(Total for Question 2 is 3 marks)



3. $\mathcal{E} = \{\text{positive integers less than or equal to } 16\}$,

$A = \{\text{factors of } 16\}$,

$B = \{\text{multiples of } 2\}$.

Write down the elements of the set

(a) A ,

.....

(1)

(b) B' ,

.....

(1)

(c) $A \cap B'$

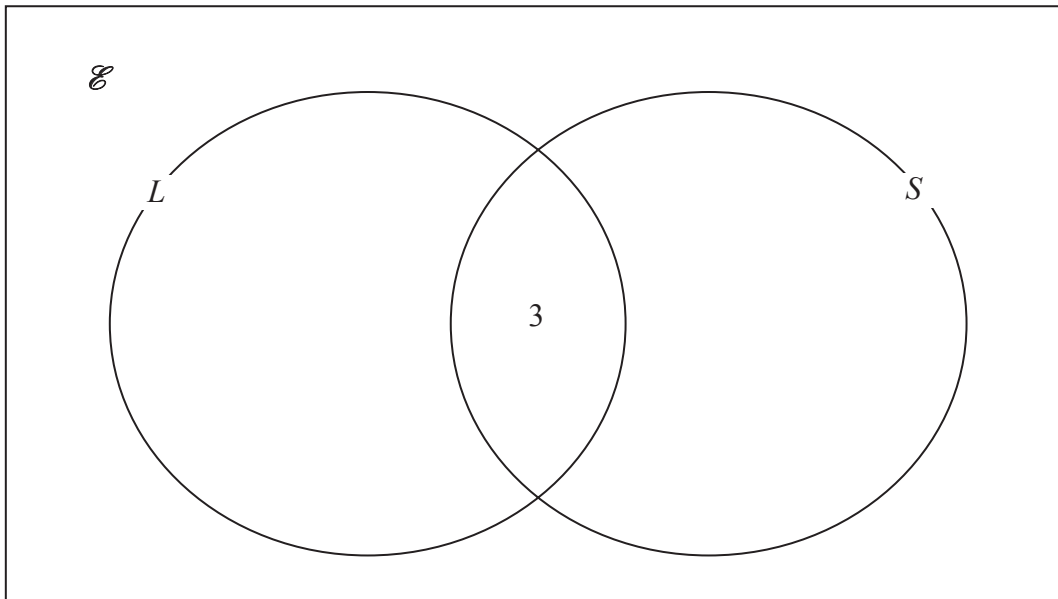
.....

(1)

(Total 3 marks)



4.



A group of 56 tourists visiting England were asked which places they had visited. 27 said that they had visited *London* (L), 22 said that they had visited *Stratford on Avon* (S) and 3 said that they had visited both *London* and *Stratford on Avon*.

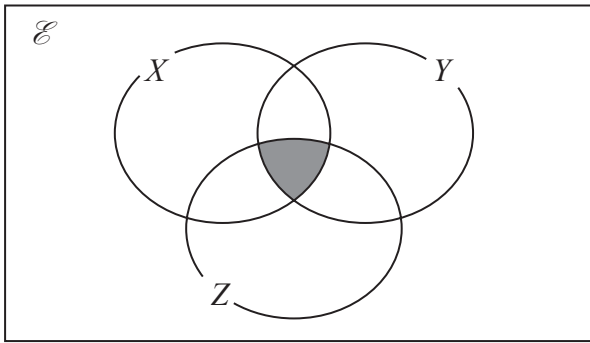
Complete the diagram above to show this information.

(Total 2 marks)



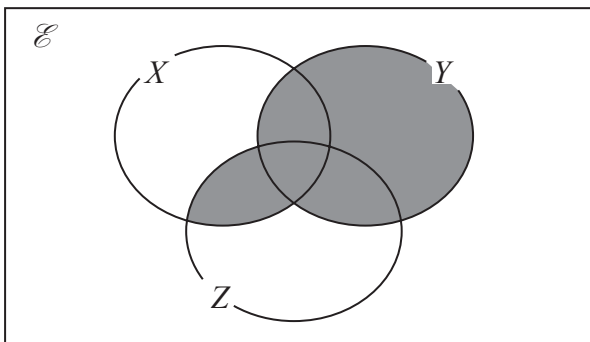
5. Describe, in set notation, the shaded region in each of the Venn diagrams below.

(a)



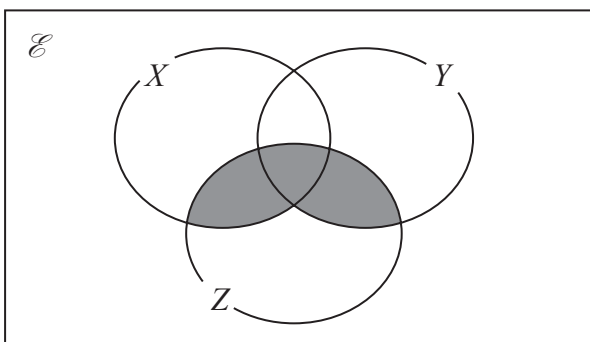
.....
(1)

(b)



.....
(1)

(c)

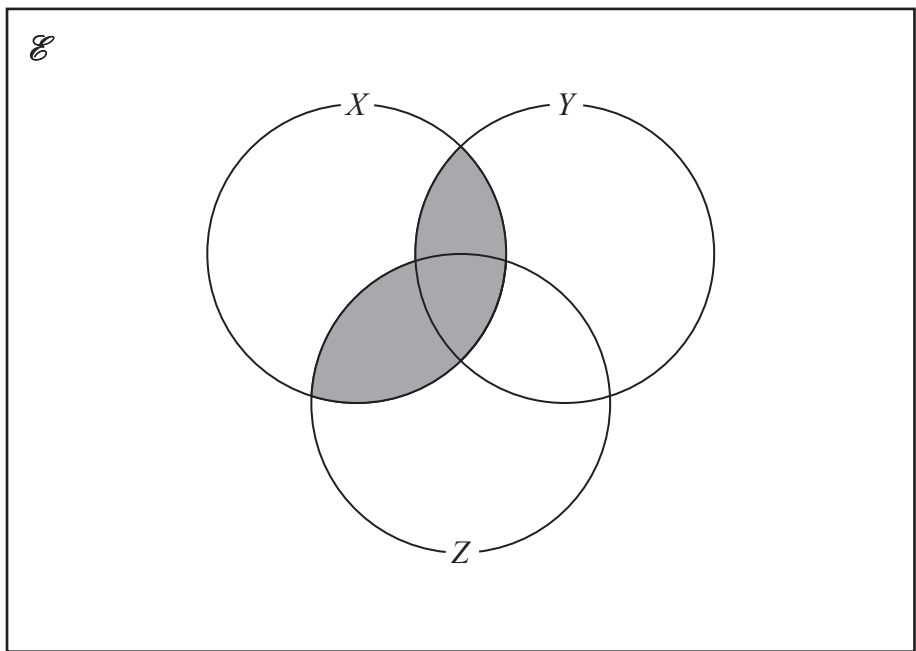


.....
(1) Q5



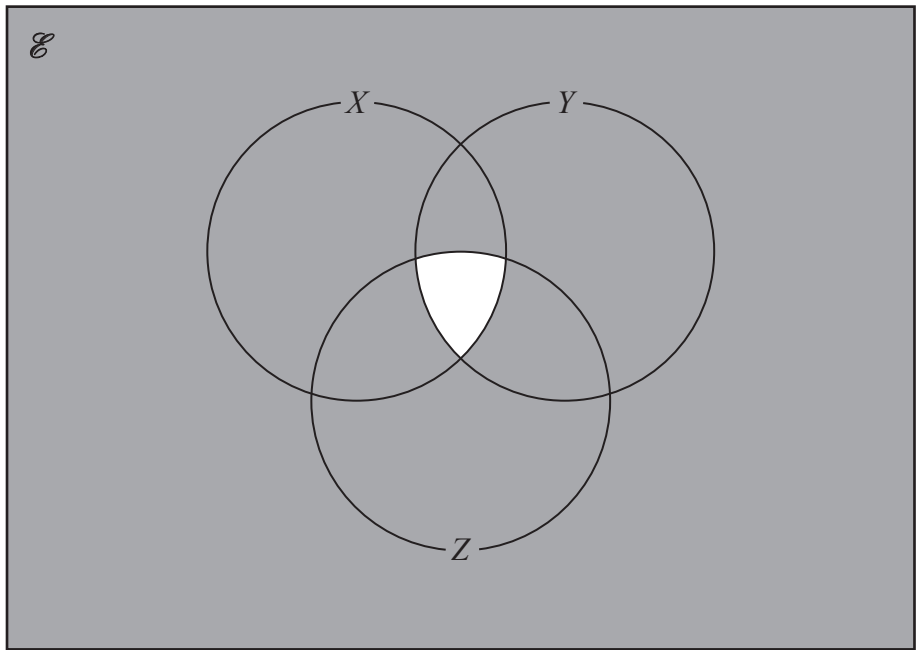
6. Describe, in set notation, the shaded region in each of the Venn diagrams below.

(a)



.....
(1)

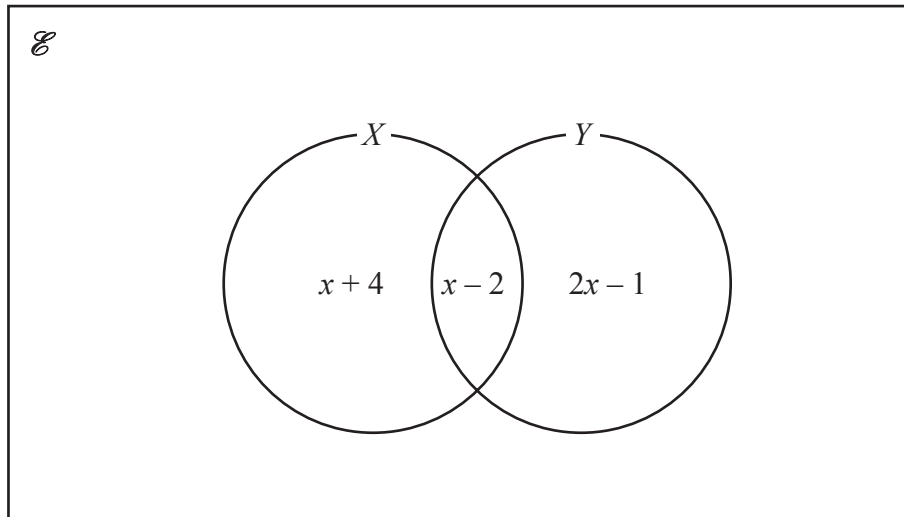
(b)



.....
(1)



7.



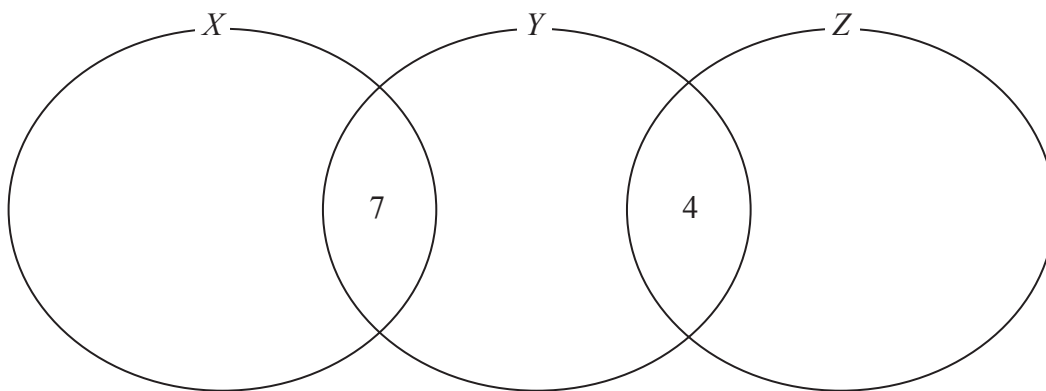
The Venn diagram gives information about the number of elements in the set X and in the set Y .

Given that $n(X) = n(Y)$, find the value of x .

$x = \dots\dots\dots$ Q7
(Total 2 marks)



8.



The Venn diagram shows three sets X, Y and Z , where $n(X) = 18$, $n(X \cap Y) = 7$, $n(Y \cap Z) = 4$, $n(X \cup Y) = 27$ and $n(Y \cup Z) = 32$.

Find

(a) $n(Y)$,

.....
(2)

(b) $n(A \cup B \cup C)$.

.....
(2) Q8

(Total 4 marks)



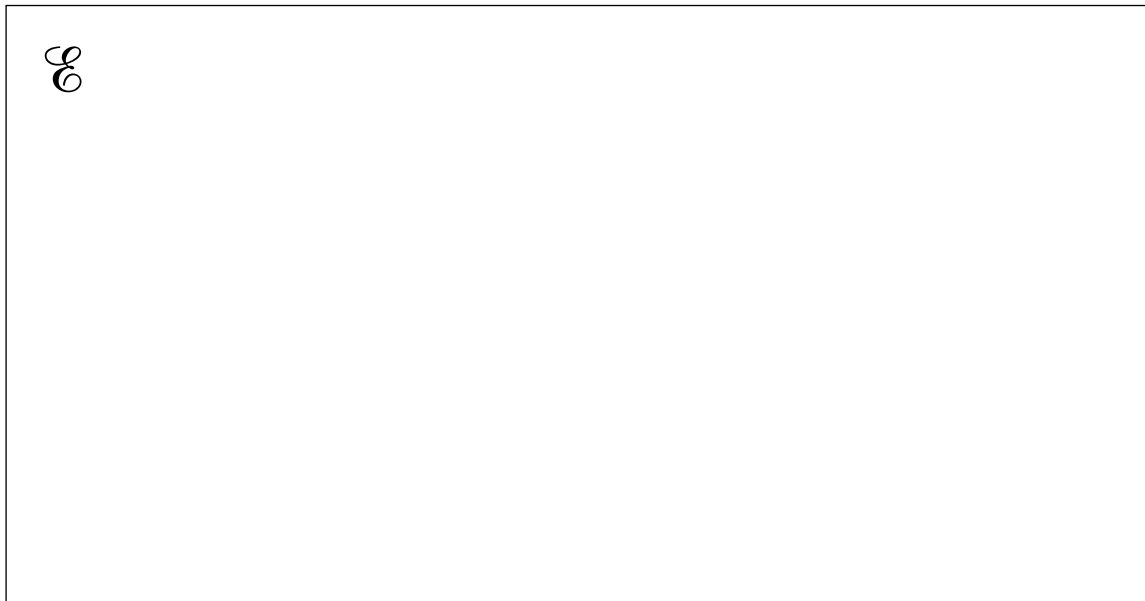
9. $\mathcal{E} = \{\text{polygons}\},$

$S = \{\text{squares}\},$

$Q = \{\text{quadrilaterals}\},$

$G = \{\text{octagons}\}.$

Represent these sets on the Venn diagram.



(Total 2 marks)

Q9



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