Edexcel B (R)

Sets

2022 International GCSE Advance Information

Sparx Topics & Key Questions

We are always looking for ways to support maths teachers and students. In order to help you and your year 11s this year we've pulled together a list of key questions which may be useful to practise with your students based on the exam board topic lists.

These 5 key questions are all taken from our library of over 45,000 high-quality questions in Sparx Maths. If you are a Sparx Maths School then your students can use the Topic Codes provided to search the full content library directly within the independent learning section of Sparx Maths to help target their revision.

Please note this is not an exhaustive topic guide it is simply designed to help you pull together some key questions to use to check for understanding in lessons, starters, or as worksheets with your learners.

Sets	Topics	Sparx Topic Codes
Set notation	Use of set notation	B691
Venn diagram	Complete Venn diagram	B188, B866

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Set notation - Use of set notation

Using set notation B691

$$A = \{w, x, z\}$$
$$B = \{x, y, z\}$$
$$C = \{y, z\}$$
$$D = \{w, y\}$$

Complete the statement below by choosing **two** of these sets to fill in the gaps.

$\boxed{} \subset \boxed{}$

The universal set, ξ, and the sets M and P are defined below.

$$\xi = \{3, 5, 6, 9, 10, 12, 15, 20, 25\}$$
$$\mathrm{M} = \{6, 9, 12, 15\}$$
$$\mathrm{P} = \{\text{multiples of } 5\}$$

Write down all the elements of $\mathrm{M} \cap \mathrm{P}$‘.

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The universal set, ξ, and set T are defined below.

$$\xi = \{\text{all integers}\}$$
$$\mathrm{T} = \{x : 4 < x \leq 11\}$$

Select **all** of the statements below that are true.

- $4 \in \mathrm{T}$
- $8.5 \in \mathrm{T}$
- $\mathrm{T} = \emptyset$
- $5 \in \mathrm{T}$
- $2 \in \mathrm{T}$
- $11 \in \mathrm{T}$

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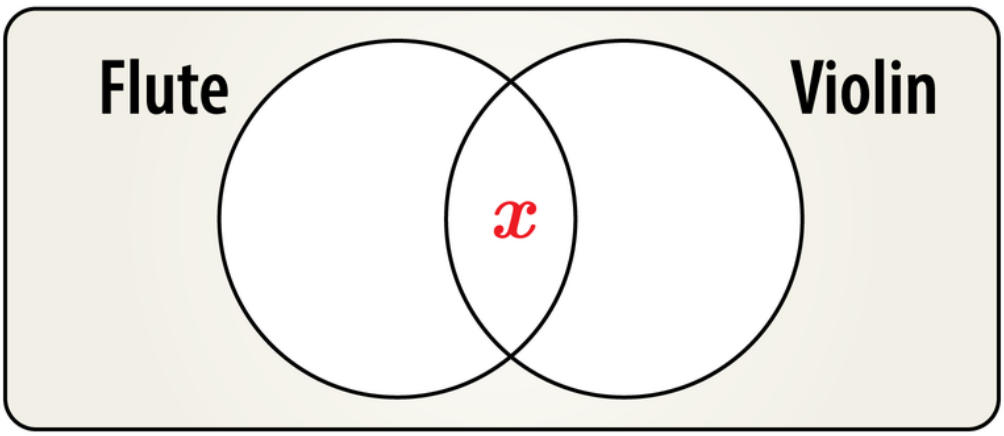
Venn diagram - Complete Venn diagram

Venn diagrams **B188**

Every student at a music college learns the flute, the violin, or both the flute and the violin.

$\frac{1}{2}$ of the students who learn the flute also learn the violin.
3 times as many students learn the violin as learn the flute.
x students learn both the flute and the violin.

Find an expression, in terms of x, for the total number of students at the college.



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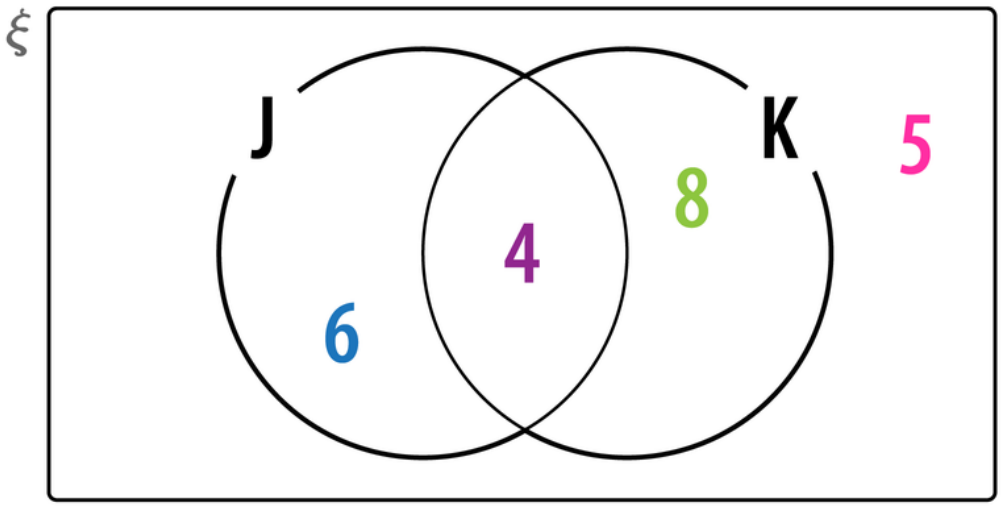
Venn diagrams with set notation **B866**

The Venn diagram below shows information about the number of items in sets J and K.
There are 23 items in total.

What is the probability that an item chosen at random is in $J' \cap K'$?
Give your answer as a fraction in its simplest form.



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