Sets

Syllabus tracker

Open it online

Name: _____

Date: _____

Tick one circle for each statement — on screen (click) or with a pen. Then try the quick checks: write your answer in the box, check it against the answers at the end, and tick “right” when you got it.

Set notation

n(A), ∪, ∩, A′, ∈ and sets written as {x : …}.

	Don't know	Shaky	Got it
I can use set notation such as n(A), ∪ and ∩.	○	○	○
I can list the elements of a set described in words or with {x : …}.	○	○	○
I can find the complement of a set.	○	○	○

Shading Venn diagrams

Shading regions and describing shaded regions with notation.

	Don't know	Shaky	Got it
I can shade a region such as A ∩ B′.	○	○	○
I can describe a shaded region with set notation.	○	○	○

Venn diagram problems

Filling in a Venn diagram from information and using algebra.

	Don't know	Shaky	Got it
I can use a Venn diagram to solve a word problem.	○	○	○
I can use algebra in a Venn diagram.	○	○	○

Quick checks

One quick question per statement. Answer in the box, then check the answers at the end.

1. A = {2, 4, 6, 8, 10} and B = {3, 6, 9}. Find n(A ∪ B).

Answer: _____ ☐ I got it right

2. ξ = {integers from 1 to 10}. A = {x : x is a prime number}. Which is A?
A {2, 3, 5, 7} **B** {1, 2, 3, 5, 7} **C** {2, 3, 5, 7, 9} **D** {3, 5, 7}

Answer: _____ ☐ I got it right

3. ξ = {1, 2, 3, 4, 5, 6}, A = {1, 2, 3}. What is A′?
A {4, 5, 6} **B** {1, 2, 3} **C** ∅ **D** {1, 2, 3, 4, 5, 6}

Answer: _____ ☐ I got it right

4. Which region is A ∩ B′?
A In A but not in B **B** In both A and B **C** In B but not in A **D** In neither A nor B

Answer: _____ ☐ I got it right

5. The shaded region is everything outside both A and B. Which describes it?
A $(A \cup B)'$ **B** $A' \cup B'$ **C** $A \cap B$ **D** $(A \cap B)'$

Answer: _____ ☐ I got it right

6. In a class of 30, 18 study French, 15 study Spanish and 4 study neither. How many study both?

Answer: _____ ☐ I got it right

7. $n(\xi) = 40$, $n(A) = 25$, $n(B) = 20$, $n(A \cap B) = x$ and $n((A \cup B)') = 3$. Find x.

Answer: _____ ☐ I got it right

Answers

Try every question first, then check.

1. 7
2. A: {2, 3, 5, 7}
3. A: {4, 5, 6}
4. A: In A but not in B
5. A: $(A \cup B)'$
6. 7
7. 8