



**THIRD SPACE
LEARNING**

Venn Diagram Check for Understanding

A 10 question retrieval quiz for
students in grades 9, 10, 11
and 12.

Grades 9 to 12

Questions

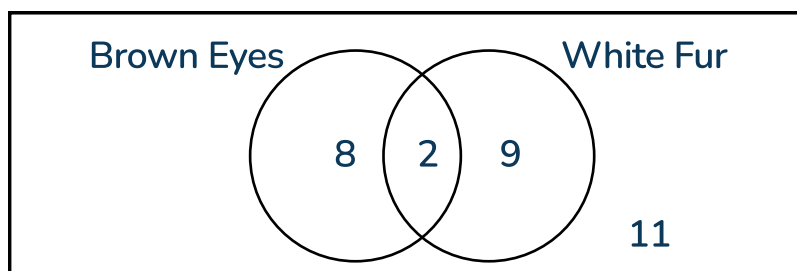
Name:

Class:

Date:

Score:

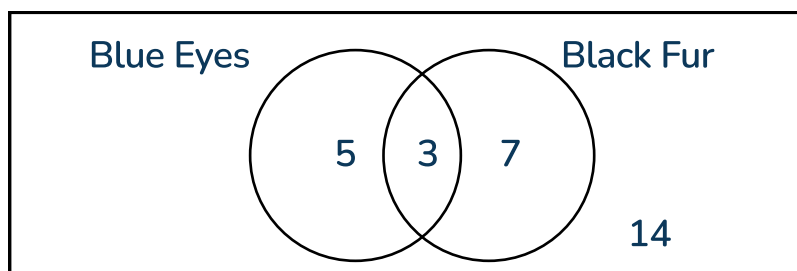
- 1 This Venn diagram shows information about the number of cats who have brown eyes and white fur.



How many cats have white fur?

Answer

- 2 This Venn diagram shows information about the number of dogs who have blue eyes and black fur

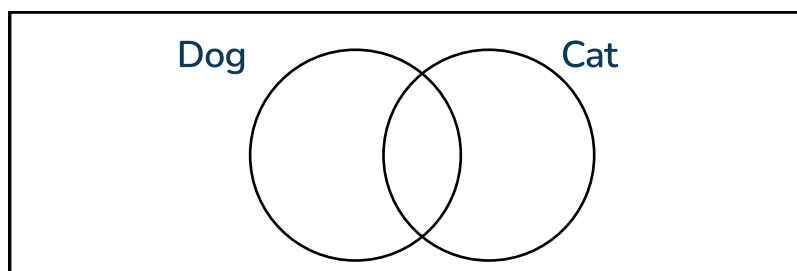


How many dogs are represented in total on the Venn Diagram?

Answer

Check for Understanding | 9th to 12th Grade | Venn Diagrams

- 3 Jamir asks 50 people whether they own a cat or a dog. 23 people own a dog, 17 people own a cat, and 9 people own a cat and a dog. Fill in the Venn diagram to represent the information that Jamir collected.

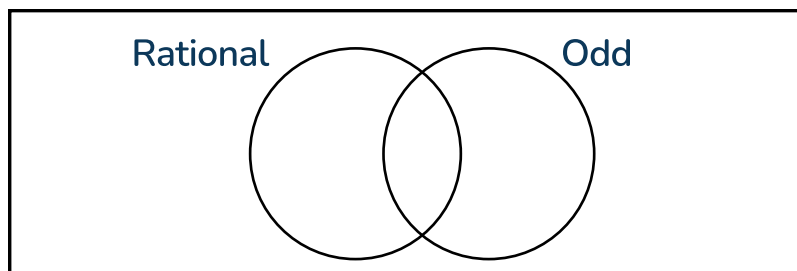


- 4 Place these values onto the following Venn diagram and use your diagram to find the number of elements in the set $R \cap O$.

$\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$

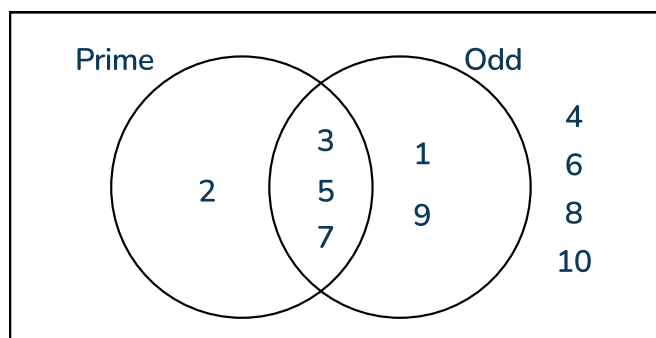
R = rational numbers

O = odd numbers



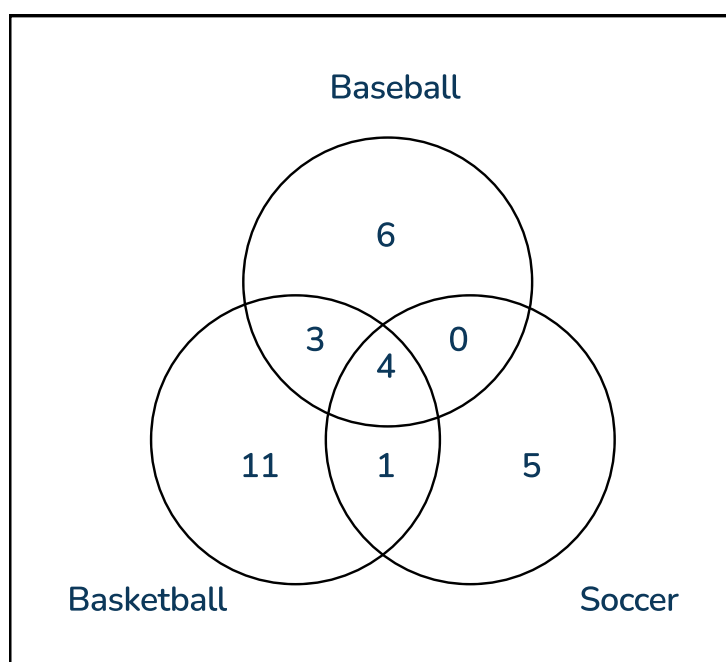
There are elements in $R \cap O$.

- 5 A number is chosen at random from the Venn diagram below. Find the probability that the number is prime.



Answer

- 6 Some people were asked whether they liked baseball, basketball or soccer. The results are shown in the Venn diagram below.



One person is chosen at random. What is the probability the person likes baseball and basketball, but not soccer?

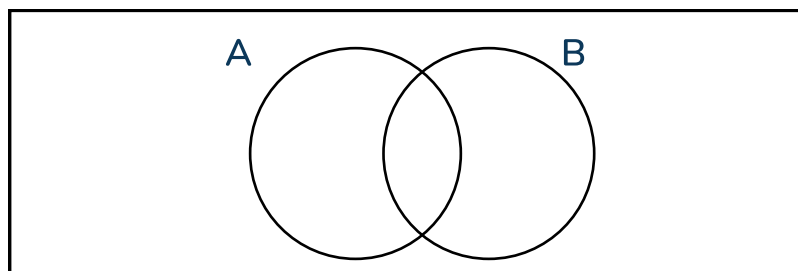
Answer

7 $\xi = \{0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16\}$

$A = \{\text{even numbers}\}$

$B = \{\text{multiples of 4}\}$

Complete the Venn diagram and find $P(A \cup B')$.

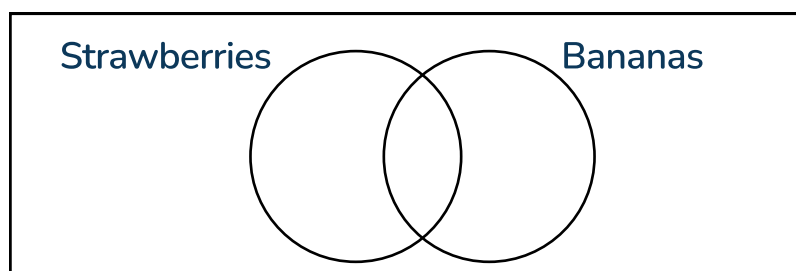


$P(A \cup B') = \underline{\hspace{2cm}}$

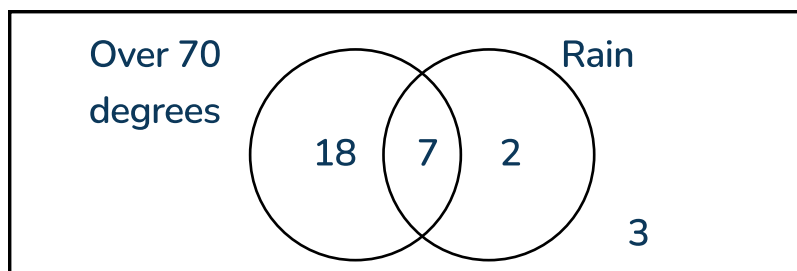
Answer

8 Some people were asked whether they like strawberries or bananas. 80% said they like strawberries and 75% said they like bananas. 7% said they like neither.

Fill in the Venn diagram with the percentages.



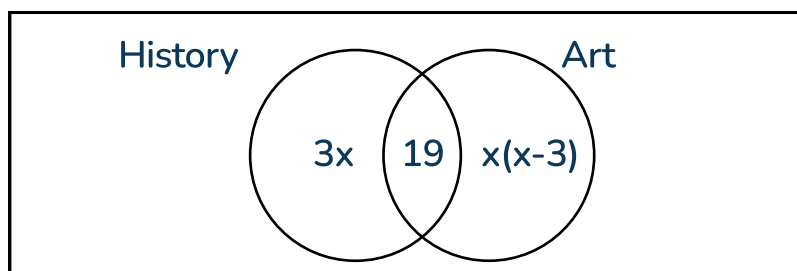
- 9 The Venn diagram shows some information about the weather in the past 30 days.



A day is chosen at random. What is the probability that the day was over 70 degrees?

Answer

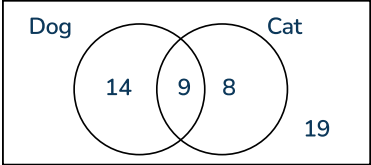
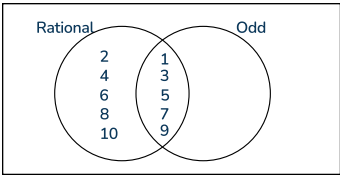
- 10 The Venn diagram below shows information about the 100 students who study history and/or art.

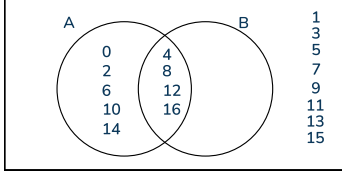
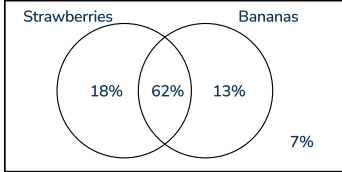


What is the probability that a student chosen at random only studies art?

Answer

Answers

Question number	Question	Answers	Standard
1	This Venn diagram shows information about the number of cats who have brown eyes and white fur. How many cats have white fur?	11	HSS.A.1
2	This Venn diagram shows information about the number of dogs who have blue eyes and black fur. How many dogs are represented in total on the Venn Diagram?	29	HSS.CP.A.1
3	Jamir asks 50 people whether they own a cat or a dog. 23 people own a dog, 17 people own a cat, and 9 people own a cat and a dog. Fill in the Venn diagram to represent the information that Jamir collected.		HSS.CP.A.1
4	Place these values onto the following Venn diagram and use your diagram to find the number of elements in the set $R \cap O$. $\xi = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10\}$ R = rational numbers O = odd numbers There are elements in $R \cap O$.	 There are 5 elements in $R \cap O$.	HSS.CP.A.1
5	A number is chosen at random from the Venn diagram below. Find the probability that the number is prime.	$\frac{4}{10}$ or 0.4 or $\frac{2}{5}$	7.SP.C.7

Question number	Question	Answers	Standard
6	Some people were asked whether they liked baseball, basketball or soccer. The results are shown in the Venn diagram below. One person is chosen at random. What is the probability the person likes baseball and basketball, but not soccer?	$\frac{3}{30}$ or $\frac{1}{10}$	7.SP.C.8 HSS.CP.B.7
7	$\xi=\{0,1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16\}$ $A= \{\text{even numbers}\}$ $B= \{\text{multiples of 4}\}$ Complete the Venn diagram and find $P(A \cup B')$. $P(A \cup B')= \dots\dots\dots$	 $P(A \cup B') = \frac{13}{17}$	HSS.CP.B.7
8	Some people were asked whether they like strawberries or bananas. 80% said they like strawberries and 75% said they like bananas. 7% said they like neither. Fill in the Venn diagram with the percentages.		HSS.CP.B.7
9	The Venn diagram shows some information about the weather in the past 30 days A day is chosen at random. What is the probability that the day was over 70 degrees?	$\frac{25}{30}$ or $\frac{5}{6}$	HSS.CP.B.7
10	The Venn diagram below shows information about the 100 students who study history and/or art. What is the probability that a student chosen at random only studies art?	$\frac{54}{100}$ or $\frac{27}{50}$	HSS.CP.B.7

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