Name:

Exam Style Questions

Set Notation

Corbettmaths

Equipment needed: Pen

Guidance

1. Read each question carefully before you begin answering it.
2. Check your answers seem right.
3. Always show your workings

Video Tutorial

www.corbettmaths.com/contents

Video 379

Answers and Video Solutions

1.   A = {odd numbers between 8 and 14}

List the elements of set A

....

(1)

2.   B = {square numbers between 10 and 50}

List the elements of set B

....

(1)

3.   C = {multiples of 3 between 1 and 31}

D = {multiples of 4 between 1 and 31}

List the members of both set C and set D

....

(2)

4. Circle the best description of $C \cup D$

C but not D   D but not C

C and D   C or D or both

(1)

5. Circle the best description of $C \cap D$

C but not D   D but not C

C and D   C or D or both

(1)

6. Circle the best description of C'

C   D

not C   not D

(1)

7. $A = \{6, 7, 8, 9, 10\}$

    $B = \{7, 9, 11\}$

    List the members of $A \cap B$

    ....
                              (2)

8. $C = \{1, 4, 9\}$

    $D = \{2, 4, 6\}$

    List the members of $C \cup D$

    ....
                              (2)

9. $E = \{11, 12, 13, 14, 15, 16, 17\}$

    $F = \{12, 14, 16, 18\}$

    Find the set $E \cap F$

    ....
                              (2)

10. ξ = {20, 21, 22, 23, 24, 25, 26, 27}

A = {20, 23, 24, 25, 26}
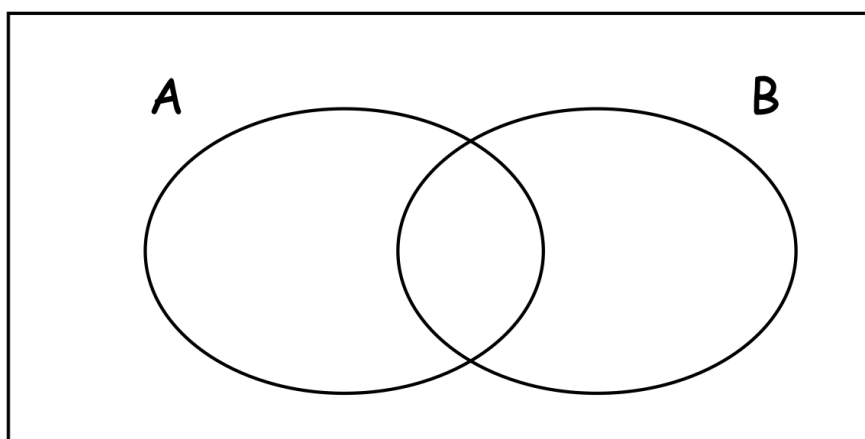
Find A'

....

(2)

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11. ξ = {11, 12, 13, 14, 15, 16, 17, 18, 19}

A = {11, 14, 18, 19}

B = {13, 14, 15, 16, 17}

(a) Complete the Venn diagram to show all the elements.

(2)

An element from the universal set, ξ, is chosen at random.

(b) Find the probability that the element is a member of $A \cap B$

....

(1)

12. $C = $ {cube numbers between 10 and 101}

$S = $ {square numbers between 10 and 101}

(a) List the members of $C \cup S$

....

(2)

(b) List the members of $C \cap S$

....

(2)

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

$A = $ {1, 4, 9}

$B = $ {1, 2, 3, 4, 6, 12}

(a) List the members of $A \cap B$

....

(2)

(b) List the members of B'

....

(2)

14. A = {multiples of 3 between 20 and 40}

    B = {odd numbers between 20 and 30}

    (a) List the members of $A \cup B$

    ....

    (2)

    (b) List the members of $A \cap B$

    ....

    (2)

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15. ξ = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14}

    C = {1, 7, 10, 13}

    D = {3, 5, 7, 9, 11, 13}

    (a) List the members of $C' \cap D'$

    ....

    (2)

    (b) List the members of $C \cup D'$

    ....

    (2)

16. ξ = {13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23}

A = {13, 17, 19, 21, 23}

B = {17, 18, 19, 20, 21, 22, 23}

(a) List the members of $A' \cup B'$

....

(2)

(b) List the members of $A' \cap B'$

....

(2)

(c) List the members of $A' \cap B$

....

(2)

(d) List the members of $A \cup B'$

....

(2)