

## Subsets of a Sample Space PRACTICE

1) Universe: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}

- A: even numbers  
 B: multiples of 3  
 C: odd numbers  
 D: numbers greater than 12  
 E: numbers less than 5  
 F: multiples of 5

- a)  $A \cup B =$  \_\_\_\_\_  
 b)  $\sim D =$  \_\_\_\_\_  
 c)  $C \cap D =$  \_\_\_\_\_  
 d)  $\sim F =$  \_\_\_\_\_  
 e)  $D \cup E =$  \_\_\_\_\_  
 f)  $F \cap C =$  \_\_\_\_\_

2) Universe: {red, yellow, green, black, blue, purple, orange, white}

- A: {red, purple}  
 B: {orange, purple, white, green}  
 C: {yellow, orange, red, purple, blue}

- a)  $A \cap C =$  \_\_\_\_\_  
 b)  $A \cup B =$  \_\_\_\_\_  
 c)  $B \cap A =$  \_\_\_\_\_  
 d)  $\sim A =$  \_\_\_\_\_  
 e)  $\sim B \cap A =$  \_\_\_\_\_

3) Universe: a 6 sided dice

- A: odd numbers  
 B: even numbers  
 C: numbers less than 4

- a)  $A \cup B =$  \_\_\_\_\_  
 b)  $A \cap C =$  \_\_\_\_\_  
 c)  $\sim C =$  \_\_\_\_\_  
 d)  $B \cap C =$  \_\_\_\_\_  
 e)  $\sim B =$  \_\_\_\_\_

## Subsets of a Sample Space PRACTICE

1) Universe: {1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20}

A: even numbers {2, 4, 6, 8, 10, 12, 14, 16, 18, 20}

B: multiples of 3 {3, 6, 9, 12, 15, 18}

C: odd numbers {1, 3, 5, 7, 9, 11, 13, 15, 17, 19}

D: numbers greater than 12 {13, 14, 15, 16, 17, 18, 19, 20}

E: numbers less than 5 {1, 2, 3, 4}

F: multiples of 5 {5, 10, 15, 20}

a)  $A \cup B = \{2, 3, 4, 6, 8, 9, 10, 12, 14, 15, 16, 18, 20\}$

b)  $\sim D = \{1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12\}$

c)  $C \cap D = \{13, 15, 17, 19\}$

d)  $\sim F = \{1, 2, 3, 4, 6, 7, 8, 9, 11, 12, 13, 14, 16, 17, 18, 19\}$

e)  $D \cup E = \{1, 2, 3, 4, 13, 14, 15, 16, 17, 18, 19, 20\}$

f)  $F \cap C = \{5, 15\}$

2) Universe: {red, yellow, green, black, blue, purple, orange, white}

A: {red, purple}

B: {orange, purple, white, green}

C: {yellow, orange, red, purple, blue}

a)  $A \cap C = \{\text{red, purple}\}$

b)  $A \cup B = \{\text{red, purple, orange, white, green}\}$

c)  $B \cap A = \{\text{purple}\}$

d)  $\sim A = \{\text{yellow, green, black, blue, orange, white}\}$

e)  $\sim B \cap A = \{\text{red}\}$

$\sim B = \{\text{red, yellow, black, blue}\}$

3) Universe: a 6 sided dice = {1, 2, 3, 4, 5, 6}

A: odd numbers {1, 3, 5}

B: even numbers {2, 4, 6}

C: numbers less than 4 {1, 2, 3}

a)  $A \cup B = \{1, 2, 3, 4, 5, 6\}$

b)  $A \cap C = \{1, 3\}$

c)  $\sim C = \{4, 5, 6\}$

d)  $B \cap C = \{2\}$

e)  $\sim B = \{1, 3, 5\}$