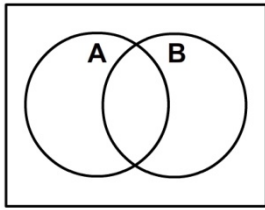
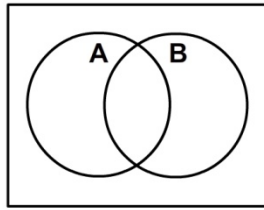


1. Shade the area on the Venn Diagram that represents the given events

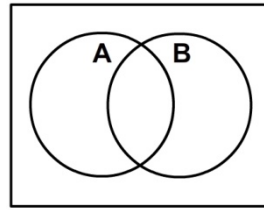
a) Event:  $A$



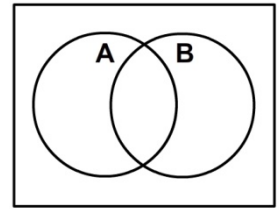
b) Event:  $B$



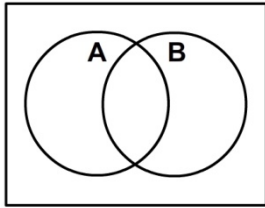
c) Event:  $A^C$



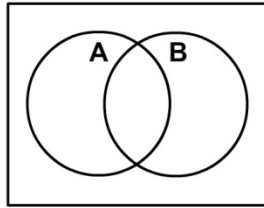
d) Event:  $S$



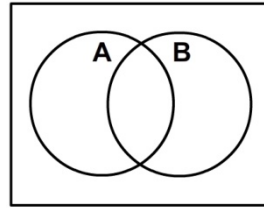
e) Event:  $A \cup B$



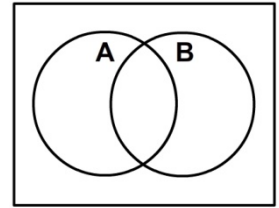
f) Event:  $A \cap B$



g) Event:  $A^C \cap B$

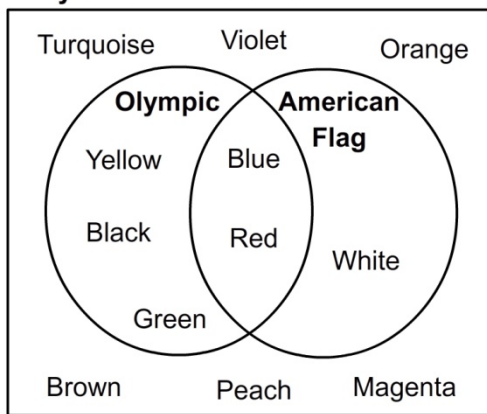


h) Event:  $A \cup B^C$



2.

**Crayola Washable Paints**



*\*Use just the first letters of each color. For colors that start with "b", use:*

*Blue: Bl*

*Brown: Br*

*Black: Bk*

a) What is the sample space  $S$ ?

b) What is the subset of Olympic colors? Call it Event  $O$ .

c) What is the subset of American Flag Colors? Call it Event  $A$ .

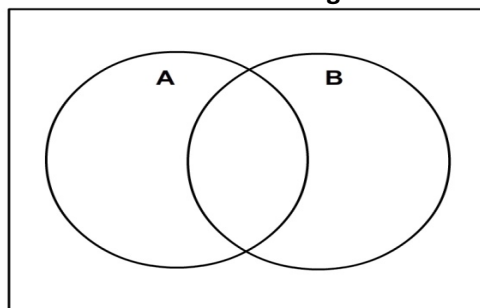
d) What colors make up the event:  $O \cup A$ ?

e) What colors make up the event:  $O \cap A$ ?

f) What colors make up the event:  $A^C$ ?

g) What colors make up the event:  $O^C \cap A^C$ ?

3. The Sample Space  $S = \{0,1,2,3,4,5,6,7,8,9\}$   
 Event  $A = \{3,4,5,6,7\}$     Event  $B = \{1,2,3,4,5\}$   
**Fill in the Venn Diagram.**

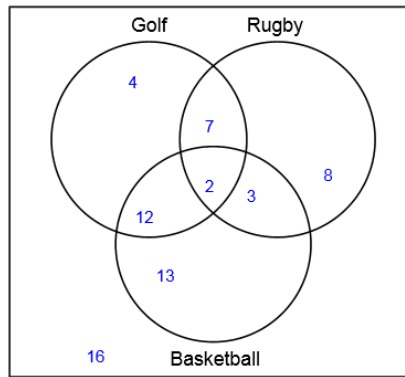


a) List all the outcomes for  $A \cup B$ .

b) List all the outcomes for  $A \cap B$ .

c) List all the outcomes for  $A^C$ .

4. Answer the following questions based on the sports Venn diagram.



a) How many students like only Basketball?	b) How many students don't like any of the three?	c) How many students do not like both Golf and Rugby?	d) How many students do not like either Basketball or Golf?
e) How many students like Golf or Rugby, but not Basketball?	f) What is the probability of choosing a student who likes all three?	g) What is the probability of choosing a student who likes Rugby or Basketball?	h) What is the probability of choosing a student who likes only Golf?

5. Event A: People who like dogs. Event B: People who like cats.

<p>Shade event <math>A^c</math>:</p> <p>What does this mean in words?</p>	<p>Shade event <math>A \cap B^c</math>:</p> <p>What does this mean in words?</p>	<p>Write this event in symbols:</p> <p>What does this mean in words?</p>
<p>Write this event in symbols:</p> <p>What does this mean in words?</p>	<p>Shade: People who don't like either dogs or cats.</p> <p>Write this event in symbols:</p>	<p>Shade: People who don't like cats.</p> <p>Write this event in symbols:</p>