

Geometry DAY 12.3

Unit 13 – Probability

Practice Problems

Determine if the following events are mutually exclusive or overlapping.

0 1. The experiment is rolling a die.  
The 1st event: the number is greater than 3  
The 2nd event: the number is even.

ME 2. The experiment is year in school.  
The 1st event: the person is a senior.  
The 2nd event: the person is a junior.

0 3. The experiment is answering multiple choice questions.  
The 1st event: the correct answer is chosen  
The 2nd event: the answer A is chosen.

0 4. The experiment is selecting a chocolate bar.  
The 1st event: the bar has nuts  
The 2nd event: the bar has caramel.

Use the Venn diagram to answer the following questions.

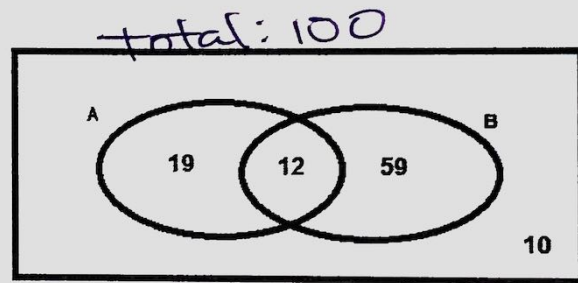
$\frac{31}{100}$  5. P(A)

$\frac{71}{100}$  6. P(B)

$\frac{29}{100}$  7. P(B)'

$\frac{90}{100} = \frac{9}{10}$  8. P(A ∪ B)

$\frac{12}{100} = \frac{3}{25}$  9. P(A ∩ B)



Use the data below to find each of the following probabilities.

Coollest Deals Sold at Ike's

Topping choice	Ice cream choice			
	Vanilla	Chocolate	Cookie dough	Mint chip
Sprinkles	9	12	16	14
Hot fudge	11	4	16	15
Caramel	10	12	18	15

51  
46  
55  
**152** Total

$\frac{28}{152} = \frac{7}{38}$  10. P(Chocolate)

$\frac{124}{152} = \frac{31}{38}$  11. P(Chocolate)' ← complement (Not)

$\frac{16}{152} = \frac{2}{19}$  12. P(Sprinkles ∩ Cookie Dough) (look for overlap)

$\frac{75}{152}$  13. P(Caramel ∪ Vanilla)  $\frac{55+30-10}{152} = \frac{75}{152}$