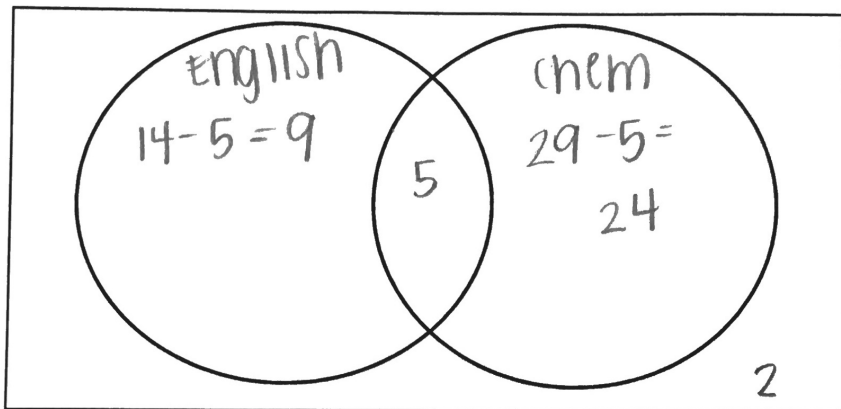


1. Out of forty students, 14 are taking English Composition and 29 are taking Chemistry.
- If five students are in both classes, how many students are in neither class? 2
 - Label the Venn diagram using the data provided.

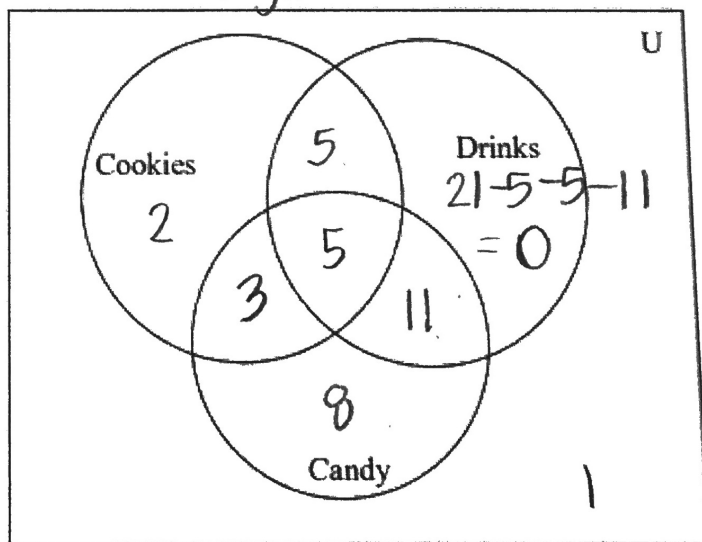


- How many are in either class? 9 in only English, 24 in only chemistry, and 5 in both
- What is the probability that a randomly-chosen student from this group is taking only the Chemistry class?

$$\frac{24}{40} = \frac{3}{5} = 0.6$$

2. At a Halloween party, some of the guests brought cookies, drinks, or candy.
Fill in the Venn Diagram per the following information. **tough*

- 5 guest brought cookies, candy and drinks ✓
- 19 guests brought exactly 2 items ✓
- 21 guests brought drinks ✓
- 20 guests did not bring cookies ✓
- 8 guests brought only candy ✓
- 2 guests did not bring a drink or candy ✓
- 5 guests brought only cookies and drinks ✓
- 11 guests brought drinks and candy ✓



total # guests = 35

Answer the questions on the next page using this Venn Diagram.

a) What is the probability that a guest selected at random brought cookies and candy?

$$\frac{8}{35} = 0.229$$

b) What is the probability that a guest didn't bring anything to the party?

$$\frac{1}{35} = 0.029$$

c) What is the probability that a guest brought drinks or candy?

$$\frac{5+5+11+3+8}{35} = \frac{32}{35} = 0.914$$

d) What is the probability that a guest brought drinks given that they brought cookies?

$$\frac{\text{drinks} \cap \text{cookies}}{\# \text{ cookies}} = \frac{10}{15} = \frac{2}{3} = 0.667$$