Warm Up:

You are playing cards with your friends. Find...

1. P(5 or 6)
$$\frac{4}{52} + \frac{4}{52} = \frac{8}{52} = .15$$

2. P(5 or heart)
$$\frac{4}{52} + \frac{13}{52} - \frac{1}{52} = \frac{16}{52} = .31$$

3. You draw a card and then replace it in the deck.

P(5 and 6)
$$\frac{4}{52} \cdot \frac{4}{52} = \frac{16}{2704} = .01$$

4. You draw a card and do not replace it in the deck.

P(5 and 6)
$$\frac{4}{52} \cdot \frac{4}{51}$$

Learning Goal: Today I will learn about frequency tables.

Success Criteria: I am able to interpret and create a two way frequency table.

Two Way Frequency Tables

Two Way Frequency Table

- compares data from two different categories that are related, such as gender and eye color.
- each entry is called "joint frequency"
- each total entry is called "marginal frequency"

Two Way Frequency Table

What color are your eyes?

		Eye Color						
		Blue	Green	Brown	Hazel	Total		
Gender	Male	a	2	6	1			
	Female	5	١	7	2			
	Total							

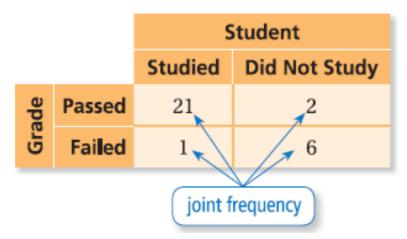
Joint Frequency

Marginal Frequency

Calculate the following probabilities:

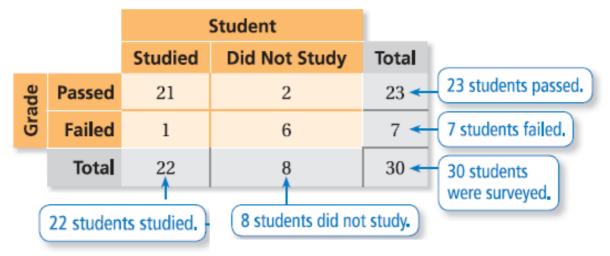
P(brown)
$$\frac{13}{26} = .5$$

P(green) $\frac{3}{26} = .12$
P(female) $\frac{15}{26} = .58$
P(female with brown eyes) $\frac{7}{15} = .46$
P(male with blue eyes) $\frac{3}{11}$



How many students studied but did not pass?

How many students did not study and failed?



What is the probability that a student studied but did not $\frac{1}{22} = .05$ pass?

What is the probability that a student did not study and failed?

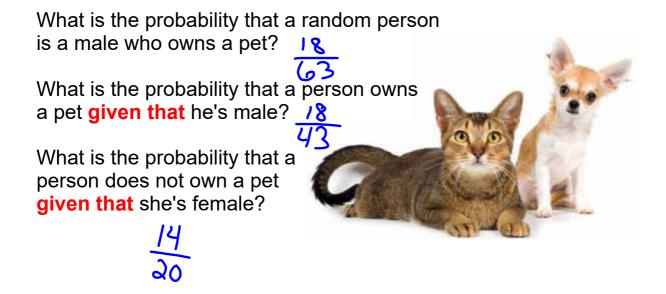
Two Way Frequency Tables

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PETS You randomly survey students in your school about whether they own a pet. The results are shown in the tally sheets. Make a two-way table that includes the marginal frequencies.

	OW			n't Own a Pet			
	Owner	Tally			Owner	Tally	
	Male	111111111111111111111111111111111111111	- 1		Male	KW WK WK WK	
	Female	***			Female	111111111111111111111111111111111111111	
-				-			

Two Way Frequency Tables



Closure: Today I learned how to create and interpret two way frequency tables.