

You need out your MSG & Agenda

### Homework: Predicting

Opening:

-Ms. Cervino wants to know the 7th graders favorite animal.

She decides to ask every 6th person who walks into the 7th grade commons before homeroom. She finds that most students like dogs so she assumes that most 7th graders favorite animal is dogs.

1) What survey method did she use?

2) Is this a valid conclusion?

3) It costs \$24 to fill up 12 gallons of gas. How much would it cost to fill up 18 gallons of gas?

**Making Predictions:**

We can make predictions by setting up a proportions

$$\frac{5}{25} = \frac{x}{200}$$

**Example 1:**

The students in Mrs. Blackwell's class brought photos from their summer break. The table shows how many students brought each type of photo. If there are 560 students in the school, how many would Mrs. Blackwood expect to bring a photo taken at a theme park?

Summer Break Photos	
Location	Students
beach	6
campground	4
home	7
theme park	11

total 28

1. We need to find how many total students there are:

2. Set up our proportion:  $\frac{\text{theme park}}{\text{total students}}$

(small) (large)

$$\frac{11}{28} = \frac{x}{560}$$

3. Solve for x:

$$x = 220 \quad \frac{28x}{28} = \frac{6160}{28}$$

**Example 2:** Mr. Sherwood opened a pizza restaurant. He took a random survey of customers to find out their favorite pizza topping and recorded it in the table below.

Topping	Customers
Pepperoni	24
Bacon	10
Sausage	12
Cheese	14

total

60

If Mr. Sherwood expects to sell 150 pizzas on Friday night, how many pepperoni pizzas should he expect to sell? (Set up a proportion.)

$$\frac{60x}{60} = \frac{3600}{60}$$

$$\frac{24}{60} = \frac{x}{150}$$

$$\underline{x = 60}$$

**Example 3:** Ms. LaRue took a survey of the students in her classes to see how many are likely to attend the school dance. She surveyed 48 students, and 12 said they would attend. If the school has 640 students, how many students might Mrs. LaRue expect to attend the school dance? (Set up a proportion.)

$$\frac{\text{Students attend}}{\text{Students}} = \frac{48}{12} = \frac{640}{x}$$
$$48x = 7680$$
$$x = 160$$

Students' Favorite Sports	
Soccer	8
Baseball/Softball	3
Volleyball	5
Track & Field	4

total = 20

practice

≈ 138

CLASS WAS TAKEN OUT OF THE  
homeroom's favorite sport.

$$\frac{5^{(s)}}{20} = \frac{x^{(L)}}{550}$$

If the school has 550  
students, how many would  
you predict to like  
volleyball?

## Tonight: 3/9's Homework

4. The following table shows Mr. Randstad's survey results from what career they want.

Career Field	Students
Entertainment	17
Education	14
Medicine	11
Public service	6
Sports	2

50

If there are 500 students in the 7<sup>th</sup> grade, how many would you predict to want a career in sports?

$$\frac{2}{50} = \frac{x}{500}$$

5.

Pizza Preferences

Topping	# of customers
Pepperoni	24
Cheese	10
Mushroom	14
Sausage	12

What is the size of the sample?

total 60

- A. 4
- B. 50
- C. 60
- D. 64

The table shows the results of Mrs. Luther's homeroom's favorite sport. If there are 450 students in the school, how many would you predict to like soccer?

Students' Favorite Sports	
Soccer	8
Baseball/Softball	3
Volleyball	5
Track & Field	4

20

$$\frac{8}{20} = \frac{x}{450}$$
$$x = 180$$