Name: _____ Date: _____

Titanic Worksheet

There were 2223 passengers onboard the *Titanic* when it sank. The table below gives the mortality information for those on board.

Titanic Mortality					
	Men	Women	Boys	Girls	Total
Survived	332	318	29	27	706
Died	1360	104	35	18	1517
Total	1692	422	64	45	2223

1. If someone aboard the *Titanic* was randomly selected, what is the probability that he or she survived the sinking?

$\frac{706}{2223}$

2. Assume that 1 person is randomly selected from all those aboard the *Titanic*.
   a. Find *P*(selecting a man or a boy).

$\frac{1692+64}{2223} = \frac{1756}{2223}$

   b. Find *P*(selecting a man or someone who survived).

$P(M) + P(S) - P(M \cap S) = \frac{1692}{2223} + \frac{706}{2223} - \frac{332}{2223} = \frac{2066}{2223}$

   c. Find the probability of selecting a woman or a boy or girl.

$\frac{422+64+45}{2223} = \frac{59}{247}$

   d. Find the probability of selecting a woman or someone who died in the sinking of the ship.

$P(W) + P(D) - P(W \cap D) = \frac{422}{2223} + \frac{1517}{2223} - \frac{104}{2223} = \frac{1835}{2223}$

3. Assume one person is randomly selected from all those aboard the *Titanic*.
   a. What is the probability that this person survived, given that the selected person is a man?

$\frac{332}{1692} = \frac{83}{423}$

   b. What is the probability of getting a man, given that the selected person survived?

$\frac{332}{706} = \frac{166}{353}$

4. Find the Probability of getting a woman or child if a *Titanic* survivor is randomly selected.

$1 - \frac{166}{353} = \frac{187}{353}$

5. If we randomly select someone who was aboard the *Titanic*, what is the probability of getting a man, given that the selected person died?

$\frac{1360}{1517}$

6. If we randomly select someone who died, what is the probability of getting a man?

$\frac{1360}{1517}$

7. What is the probability of getting a boy or girl, given that the randomly selected person is someone who survived?

$\frac{29+27}{706} = \frac{28}{353}$

8. What is the probability of getting a man or woman, given that the randomly selected person is someone who died?

$\frac{1360+104}{1517} = \frac{1464}{1517}$