

3. There are 25 students in Mrs. Y's eighth-grade class. On a cold winter day in February, many of the students had runny noses or sore throats. Round your answers to three decimal places.

	Sore Throat	No Sore Throat
Runny Nose	6	12
No Runny Nose	4	3

- a. Find the probability that a randomly selected student has a runny nose

$$\frac{18}{25} = 0.72 \quad \checkmark$$

- b. Find the probability that a randomly selected student has a sore throat or a runny nose

~~$$\frac{10}{25} = 0.4$$~~

$$\frac{10}{25} + \frac{6}{25} - \text{sore throat and runny nose}$$

- c. Find the probability that a randomly selected student has neither a sore throat nor a runny nose

~~$$\frac{15}{25} = 0.6$$~~

- d. Find the probability that two different randomly selected students have a runny nose

~~$$\frac{6}{25} \cdot \frac{12}{25} = \frac{72}{625} = 0.24$$~~

$$\frac{12}{25} \cdot \frac{14}{25}$$

- e. Find the probability that a randomly selected student has a sore throat given that he has a runny nose

~~$$\frac{6}{25} = 0.24$$~~