

Conditional Probability WS

Name Justin

Write answers as decimals rounded to the nearest hundredth.

Jerrod collected data on 100 randomly selected students, and summarized the results in a table. Complete the table to indicate totals.

		Owns an MP3 player		
		Yes	No	Total
Owns a Smart Phone	Yes	28	12	40
	No	34	26	60
	Total	62	38	100

From the data, a student is selected randomly. Find the probability that ...

- a. ... the student owns an MP3 player and a smart phone. $\frac{28}{100} = 0.28$
- b. ... the student owns a smart phone given that he/she owns an MP3 player. $\frac{28}{62} = 0.45$
- c. ... the students owns an MP3 player given that he/she owns a smart phone. $\frac{28}{40} = 0.70$
- d. ... the student does not own a smart phone. $\frac{60}{100} = 0.60$
- e. ... the student owns a smart phone or an MP3 player. $\frac{40 + 62 - 28}{100} = \frac{74}{100} = 0.74$
- f. ... the student owns a smart phone or an MP3 player, but not both. $\frac{34 + 12}{100} = \frac{46}{100} = 0.46$
- g. ... the student owns a smart phone and does not own an MP3 player. $\frac{12}{100} = 0.12$
- h. ... the student owns a smart phone or does not own an MP3 player. $\frac{40 + 38 - 12}{100} = \frac{66}{100} = 0.66$
- i. ... the student does not own a smart phone given that he/she does not own an MP3 player. $\frac{26}{38} = 0.68$
- j. ... the students owns neither device. $\frac{26}{100} = 0.26$