In a bag are the following: 6 Snickers bars, 8 Kit Kat bars, and 5 Milky way bars. Find each probability as a fraction without reducing.

a) You randomly grab a candy bar, eat it, then grab another, etc.

P(Kit Kat and Snickers and Kit Kat)

$$\frac{8}{19} \cdot \frac{6}{18} \cdot \frac{7}{17} = \frac{336}{5814}$$

b) You randomly grab a candy bar, don't like the one you grabbed so you put it back, then grab another, etc.

P(Milky Way and Milky Way and Snickers)

$$\frac{5}{19} \cdot \frac{5}{19} \cdot \frac{6}{19} = \frac{150}{6859}$$

Find each probability as a fraction without reducing.

	Run	Bike	Swim	Total
Men	23	19	11	53
Women	16	27	14	57
Total	39	46	25	110

a) P(Swim and Woman) $= \frac{14}{110}$

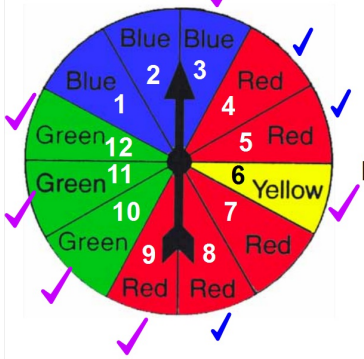
b) P(Man or Bike) $= \frac{80}{110}$

neither of these are conditional probabilities, therefore, they are out of the total of 110 people in the survey.

c) P(Run | Woman) $= \frac{16}{57}$

This is a conditional probability, it's no longer out of the total of 110. It's restricted to just the Women in the survey

Find each probability as a fraction without reducing.



a) P(multiple of 3 or green) $\frac{6}{12}$

b) P(factor of 40 and red) $\frac{3}{12}$

Solve. $\frac{5\log_2(10x + 13)}{5} = \frac{25}{5}$

$\log_2(10x + 13) = 5$

change to an exponential eq.

$2^5 = 10x + 13$

$32 = 10x + 13$

$-13 \quad -13$

$\frac{10x}{10} = \frac{19}{10}$

$x = 1.9$