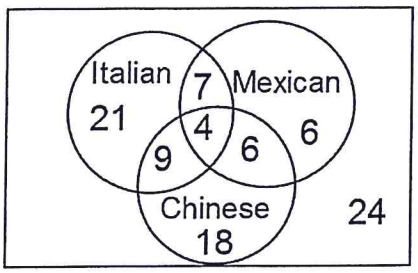
Algebra 2 Bellwork Friday, April 15, 2016

This Venn Diagram shows foods people like.



A person is selected at random.
Find each probability as a fraction.

1. P(don't like Italian)
2. P(like Chinese but not Mexican)
3. P(Like Mexican and Italian but not Chinese)
4. P(Like Italian or Chinese)
5. P(Don't like Italian, Mexican, or Chinese)

6. The probability that I wear a green shirt is $\frac{3}{8}$ and the probability that I wear black pants is $\frac{2}{7}$, and the probability that I wear blue pants is $\frac{5}{12}$. Find each probability as a percent to the nearest tenth.

a). The probability that I wear a green shirt or I wear black pants to work today.

P(green shirt or black pants) =

b) The probability that I wear a pair of black pants or a pair of blue pants.

P(black pants or blue pants) =

7. You go in the back yard an shoot some arrows at a target. The package of arrows has 3 with red feathers, 8 with blue feathers, and 2 with green feathers. You pull out an arrow at random and shoot it at the target. You missed the bulls-eye so you grab another arrow at random and shoot it. Find each probability as a fraction.

a) P(green arrow and blue arrow)=

b) P(red arrow and red arrow)=

8. A survey shows that 80% of people like Oreos. Find the probability that if you ask 4 people, 3 of them will say that they like Oreos. Give your answer as a percent to the nearest tenth.

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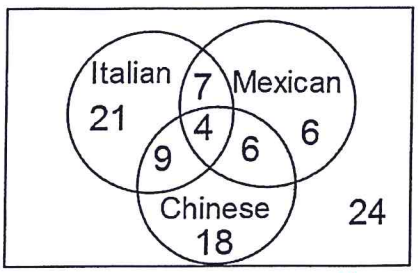
Answers

This Venn Diagram shows foods people like.



A person is selected at random.
Find each probability as a fraction.

TOTAL = 95

1. P(don't like Italian) = $\frac{54}{95}$

2. P(like Chinese but not Mexican) = $\frac{27}{95}$

3. P(Like Mexican and Italian but not Chinese) = $\frac{7}{95}$

4. P(Like Italian or Chinese) = $\frac{65}{95}$

5. P(Don't like Italian, Mexican, or Chinese) = $\frac{24}{95}$

6. The probability that I wear a green shirt is $\frac{3}{8}$ and the probability that I wear black pants is $\frac{2}{7}$, and the probability that I wear blue pants is $\frac{5}{12}$. Find each probability as a percent to the nearest tenth.

a). The probability that I wear a green shirt or I wear black pants to work today.

P(green shirt or black pants) =

$\frac{3}{8} + \frac{2}{7} - \frac{3}{8} \cdot \frac{2}{7} =$ 55.4%

b) The probability that I wear a pair of black pants or a pair of blue pants.

P(black pants or blue pants) =

$\frac{2}{7} + \frac{5}{12} =$ 70.2%

7. You go in the back yard an shoot some arrows at a target. The package of arrows has 3 with red feathers, 8 with blue feathers, and 2 with green feathers. You pull out an arrow at random and shoot it at the target. You missed the bulls-eye so you grab another arrow at random and shoot it. Find each probability as a fraction.

TOTAL # of arrows = 13

a) P(green arrow and blue arrow)=

$\frac{2}{13} \cdot \frac{8}{12} = \frac{16}{156}$

b) P(red arrow and red arrow)=

$\frac{3}{13} \cdot \frac{2}{12} = \frac{6}{156}$

8. A survey shows that 80% of people like Oreos. Find the probability that if you ask 4 people, 3 of them will say that they like Oreos. Give your answer as a percent to the nearest tenth.

$(.80)(.80)(.80)(.2) \cdot {}_4C_3 \Rightarrow$ 41.0%

(.80) LIKE oreos, (.80) LIKE oreos, (.80) LIKE oreos, (.2) DON'T LIKE OREOS

${}_4C_3$ = # WAYS

3 of 4 people can say they like oreos = 4