

8.3

Puzzle Time

What Do You Call A Pig That Does Karate?

Write the letter of each answer in the box containing the exercise number.

Find the probability.

1. A bowl contains three grapefruits and four oranges. You randomly select a piece of fruit, eat it, and then randomly select another piece of fruit. Find the probability that you select an orange second given that you selected a grapefruit first.
2. You have five mystery novels and two science fiction novels. You randomly select two different novels to read. Find the probability that you select a mystery novel to read second given that you randomly selected a science fiction novel to read first.

A company surveys cyclists about bicycle designs. The two-way table shows the joint relative frequencies. Find the probability.

		Like	Dislike	No Opinion
Design	A	0.326	0.023	0.112
	B	0.279	0.102	0.158

3. $P(\text{like} \mid \text{Design } A)$
4. $P(\text{no option} \mid \text{Design } B)$
5. $P(\text{Design } A \mid \text{dislike})$
6. $P(\text{Design } B \mid \text{like})$

At a restaurant, 92% of the customers order an entrée, 28% order an entrée and a soup, and 36% order an entrée and a dessert.

7. What is the probability that a customer who orders an entrée also orders a dessert?
8. What is the probability that a customer who orders an entrée also orders a soup?

1	2	3	4		5	6	7	8
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Answers

H. 0.461

P. about 30%

R. 0.707

O. about 39%

O. about 83%

C. 0.184

K. 0.293

P. about 67%

**Puzzle Time****What Are A Plumber's Favorite Shoes?**

Write the letter of each answer in the box containing the exercise number.

Find the probability.

1. In a group of 25 students at lunch, 10 prefer ketchup on their hamburger, 10 prefer mustard on their hamburger, and 5 like both ketchup and mustard on their hamburger. The rest of the students in the group prefer neither. What is the probability that a student selected from this group will prefer ketchup or mustard on their hamburger?
2. A card is randomly selected from a standard deck of 52 cards. What is the probability that it is a 2 or an 8?
3. In a class of 50 high school juniors, 32 students either play a sport or are in the marching band. There are 22 juniors who play a sport and 16 who are in the marching band. What is the probability that a randomly selected junior plays a sport and is in the marching band?
4. You roll a die. What is the probability that you roll an even number or a 5?
5. You roll a die. What is the probability that you roll an odd number or a factor of 6?

Answers

O. $\frac{3}{25}$

L. $\frac{2}{13}$

G. $\frac{2}{3}$

C. $\frac{3}{5}$

S. $\frac{5}{6}$

1	2	3	4	5