

1. How many ways can you award 5th and 6th place in a race of 10 runners?

2. How many ways can you choose a committee of 10 people from the 30 people in class?

3. How many different ways can you arrange the letters of *committee*?

4. How many different pizzas can you make from the following toppings, assuming you have to choose only 1 from each category?

Sauce

marinara
garlic

Cheese

jack
mozzarella
cheddar

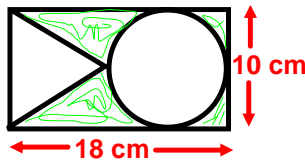
Meat

sausage
ham
bacon
hamburger

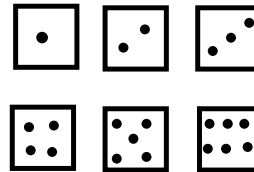
Vegetable

onion
pepper
tomato
basil

5. What is the probability of hitting the green area?



6. What is the probability that when a numbered cube is rolled, a number greater than 4 and less than 3 is rolled?



7. Solve

$$\frac{x-2}{-2} = \frac{x+\frac{1}{2}}{2x+1}$$

8. Simplify. State domain restrictions.

$$\frac{2x-x^2}{x-3} + \frac{3}{x-3}$$