



Name _____ Class _____ Date _____

1 **Theoretical probability** is the probability based on all the possible outcomes.

True or false?

- A true
- B false

3 The letters in the word **STUDENTS** are put into a bag. What is the **probability** of picking the letter **T**?

- A $\frac{3}{8}$
- B $\frac{1}{8}$
- C $\frac{2}{7}$
- D $\frac{1}{7}$

2 A pair of six-sided dice is rolled, what is the **probability** of getting **doubles**?

- A $\frac{1}{2}$
- B $\frac{1}{3}$
- C $\frac{1}{6}$
- D $\frac{1}{12}$



4 A bag contains 4 orange, 12 black and 10 white marbles. What is the **probability** of picking a **white marble**?

- A $\frac{5}{12}$
- B $\frac{2}{6}$
- C $\frac{5}{13}$
- D $\frac{1}{6}$

5
V
is
n
T
A
E



PREVIEW

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7
F
c
2
p

can she choose from?

- A 10
- B 24
- C 32
- D 36

How many different choices are there?

- A 10
- B 30
- C 36
- D 45



9 The notation **$n!$** is **n factorial** and means that the numbers from **n** to **1** are **added together**. For example $3! = 3 + 2 + 1$.

True or false?

- A true
- B false

10 What does a **permutation** of ${}_6P_2$ mean?

- A 6 objects are filling 2 positions
- B 2 objects are filling 6 positions
- C 6 objects are filling 4 positions
- D 4 objects are filling 2 positions



ANSWER KEY

Theoretical probability is the probability based on all the possible outcomes.

True or false?

- A true
- B false

(a)

A pair of six-sided dice is rolled, what is the **probability** of getting **doubles**?

- A $\frac{1}{2}$
- B $\frac{1}{3}$
- C $\frac{1}{6}$
- D $\frac{1}{12}$



(c)

The letters in the word **STUDENTS** are put into a bag. What is the **probability** of picking the letter **T**?

- A $\frac{3}{8}$
- B $\frac{1}{8}$
- C $\frac{2}{7}$
- D $\frac{1}{4}$

(d)

A bag contains 4 orange, 12 black and 10 white marbles. What is the **probability** of picking a **white** marble?

- A $\frac{5}{12}$
- B $\frac{2}{13}$
- C $\frac{5}{13}$
- D $\frac{6}{13}$

(c)



PREVIEW

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- A 10
- B 24
- C 32
- D 36

- A 10
- B 30
- C 36
- D 45



The notation $n!$ is **n factorial** and means that the numbers from n to **1** are **added together**. For example $3! = 3 + 2 + 1$.

True or false?

- A true
- B false

(b)

What does a **permutation** of ${}_6P_2$ mean?

- A 6 objects are filling 2 positions
- B 2 objects are filling 6 positions
- C 6 objects are filling 4 positions
- D 4 objects are filling 2 positions

(a)