

Math Sheet

Name _____ Score _____ / 10 Teacher _____ Date _____

Two Dice Probability

Use the stated equally likely outcomes. Give each probability as a simplified fraction.

1. Roll two distinguishable fair six-sided dice.



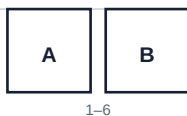
How many ordered outcomes are in the sample space?

6. Roll two distinguishable fair six-sided dice.



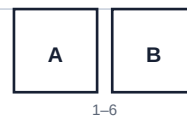
What is the probability of first die: even?

2. Roll two distinguishable fair six-sided dice.



What is the probability of not (first die divides 17) and not (second die divides 17)?

7. Roll two distinguishable fair six-sided dice.



What is the probability of product is a multiple of 1?

3. Roll two distinguishable fair six-sided dice.



What is the probability of product = 37?

8. Roll two distinguishable fair six-sided dice.



What is the probability of second die: even?

4. Roll two distinguishable fair six-sided dice.



What is the probability of not (sum = 7)?

9. Roll two distinguishable fair six-sided dice.



What is the probability of first die: even and second die: even?

5. Roll two distinguishable fair six-sided dice.



What is the probability of not (absolute difference = 1)?

10. Roll two distinguishable fair six-sided dice.



What is the probability of first die divides 60 and second die divides 60?

Math Sheet

Name _____ Score _____ / 10 Teacher _____ Date _____

Two Dice Probability

Answer key

Use the stated equally likely outcomes. Give each probability as a simplified fraction.

1. Roll two distinguishable fair six-sided dice.

A

B

1-6

How many ordered outcomes are in the sample space?

36. Six choices for the first die times six for the second give $6 \times 6 = 36$ ordered outcomes.

6. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of first die: even?

$P = 1/2$. A=1...6: 0, 6, 0, 6, 0, 6. 18 favorable outcomes out of 36; $18/36 = 1/2$.

2. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of not (first die divides 17) and not (second die divides 17)?

$P = 25/36$. A=1...6: 0, 5, 5, 5, 5, 5. 25 favorable outcomes out of 36; $25/36 = 25/36$.

7. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of product is a multiple of 1?

$P = 1$. A=1...6: 6, 6, 6, 6, 6, 6. 36 favorable outcomes out of 36; $36/36 = 1$.

3. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of product = 37?

$P = 0$. A=1...6: 0, 0, 0, 0, 0, 0. 0 favorable outcomes out of 36; $0/36 = 0$.

8. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of second die: even?

$P = 1/2$. A=1...6: 3, 3, 3, 3, 3, 3. 18 favorable outcomes out of 36; $18/36 = 1/2$.

4. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of not (sum = 7)?

$P = 5/6$. A=1...6: 5, 5, 5, 5, 5, 5. 30 favorable outcomes out of 36; $30/36 = 5/6$.

9. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of first die: even and second die: even?

$P = 1/4$. A=1...6: 0, 3, 0, 3, 0, 3. 9 favorable outcomes out of 36; $9/36 = 1/4$.

5. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of not (absolute difference = 1)?

$P = 13/18$. A=1...6: 5, 4, 4, 4, 4, 5. 26 favorable outcomes out of 36; $26/36 = 13/18$.

10. Roll two distinguishable fair six-sided dice.

A

B

1-6

What is the probability of first die divides 60 and second die divides 60?

$P = 1$. A=1...6: 6, 6, 6, 6, 6, 6. 36 favorable outcomes out of 36; $36/36 = 1$.