Math Virtual Learning

Math 7/Pre-Algebra

Theoretical Probability

April 20, 2020

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Lesson: April 20, 2020

Objective/Learning Target:
Students will solve problems involving theoretical probability.

Warm-Up

1. What is 9/30 in simplest form?

2. In a pasture there are 12 white horses and the rest are black. If there are 52 horses in the pasture. What fraction are black, in simplest form?

3. Nowlin Middle School's Math Club has 14 girls and 12 boys. What fraction of the members are girls, in simplest form?

Warm-Up Answers

1. What is 9/30 in simplest form? 9 & 30 can both be divided by a gcf (greatest common factor) of 3. Doing so, gives us a simplified fraction of 3/10.

2. In a pasture there are 12 white horses and the rest are black. If there are 52 horses in the pasture. What fraction are black, in simplest form? We know 12 are white, so we need to subtract 12 from 52 to find out that we have 40 black horses. This makes our fraction of black horses 40/52. 40 & 52 can be divided by a gcf of 4, giving us a simplified fraction of 10/13.

3. NMS's Math club has 14 girls and 12 boys. What fraction of the members are girls, in simplest form? We need to add 14 & 12 to get a 26 total members. Our fraction is 14/26 which can be divided by a gcf of 2, giving us a simplified fraction of 7/13.

Background Information

Probability is the number that describes the chance that a particular event will occur. Probability can be expressed in many different ways, including as a fraction.

Instructional Video

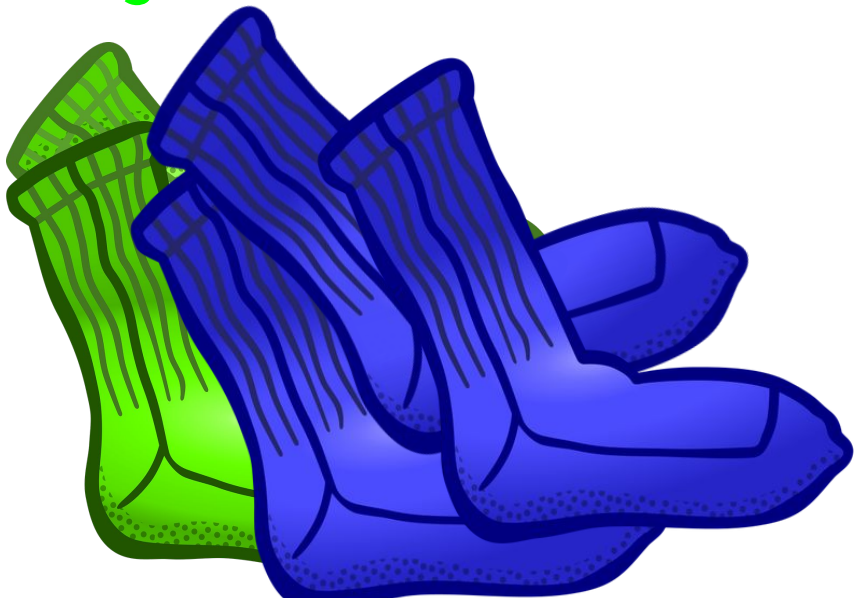
Watch this video!

Brainpop Probability

Click this link if you cannot get signed in

Guided Practice #1

A drawer contains five socks: two green and three blue. What is the probability that a sock pulled out of the drawer at random will be green? Answer as a fraction in simplest form.



Step 1 : How many socks are green? 2

Step 2 : How many socks are there total? 5

Step 3 : Write as a fraction and simplify. 2/5

Guided Practice #2

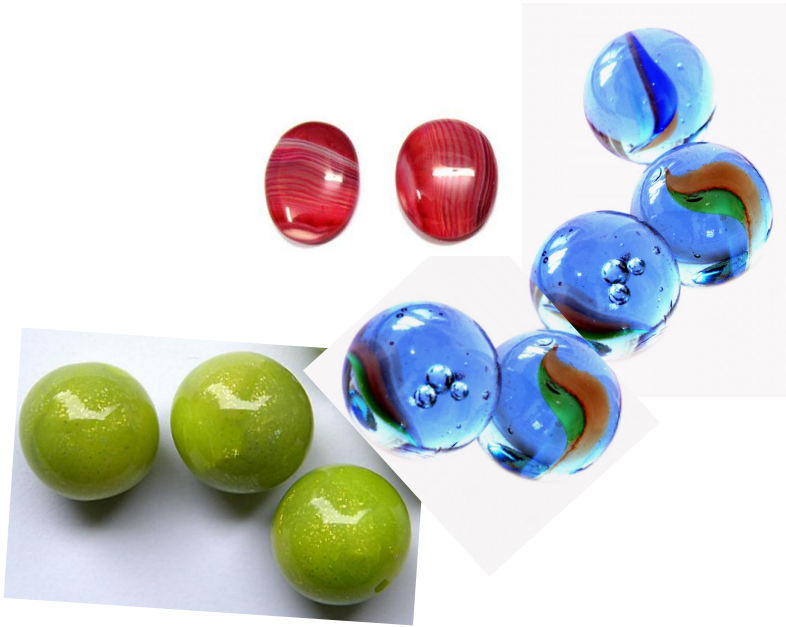
Nine cards are numbered 1 through 9. What is the probability of selecting a card with a number greater than four or an even number?

Step 1 : How many cards are greater than 4? 5
Step 2 : How many cards are an even number? 4
Step 3 : How many cards are greater than 4 **or** an even number? 7 total – 2, 4, 5, 6, 7, 8, 9
Step 4 : How many cards are there total? 9
Step 5 : What is the fraction in simplest form. 7/9

Guided Practice #3

What is the probability that Kai will select a red or blue marble when he selects one marble from a jar containing three green, two red and five blue marbles?

Step 1 : How many marbles are red? 2
Step 2 : How many marbles are blue? 5
Step 3 : How many marbles are red or blue? 7 total
Step 4 : How many marbles are there total? 10
Step 5 : What is the fraction in simplest form. 7/10



Individual Practice

1) A two-sided coin is flipped and lands on heads.

2) Roll a die and get a number greater than six.

3) Spin a spinner numbered 1-8, and you land on a number less than 3.

4) You will watch at least 1 hour of TV today.

5) Pick a blue marble from an equal number of blue, yellow, red, and green marbles.

Individual Practice Answers

1) A two-sided coin is flipped and lands on heads. 1/2

2) Roll a die and get a number greater than six. 0/6

3) Spin a spinner numbered 1-8, and you land on a number less than 3. 2/8 = 1/4

4) You will watch at least 1 hour of TV today. 1/24

5) Pick a blue marble from an equal number of blue, yellow, red, and green marbles. 1/4

Online Practice Opportunities

Brainpop Jr Probability Quiz

Brainpop Probability Quiz Review