Great MathWorksheets

Grade 6 – Lesson 27

Math Practice Sheets

Probability

- Examples
- Practice Questions
- Extra Challenge Unit

Student Name

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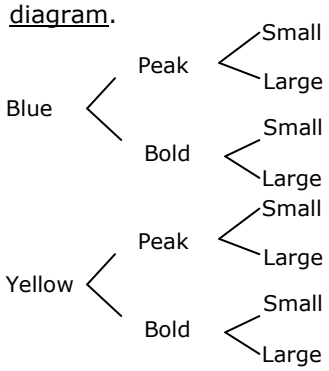
Unit 27.1 Counting Possible Outcomes

Example

The table shows the different crayons. How can you find the total number of possible choices of crayons if you have to choose two crayons?

Color	Kind	Size
Blue	Peak	Small
Yellow	Bold	Large

First Way by making tree diagram.



There are 8 choices in total.

Second Way

Choice of colors = 2

Choice of kinds = 2

Choice of size = 2

Total number of choices =

$2 \times 2 \times 2 = 8$ ways

There are 8 choices in total.

Third Way

We can make an organized list and find the total ways.

1. Blue, Peak, Small
2. Blue, Peak, Large
3. Blue, Bold, Small
4. Blue, Bold, Large
5. Yellow, Peak, Small
6. Yellow, Peak, Large
7. Yellow, Bold, Small
8. Yellow, Bold, Large

There are 8 choices in total.

The result of a single experiment is called an event.
Example: Flipping heads, when flipping a coin, is an event.

The set of all possible outcomes is called sample space. Example: The sample space of flipping a coin is head and tail. Sample space for single toss of cube is 1, 2, 3, 4, 5, and 6.

The combination of two or more single events is compound event.

If a spinner with three colors is spun three times, then the possible outcomes = $3 \times 3 \times 3 = 27$.

Exercise

1. Make an organized table of total possible outcomes when flipping a coin and tossing a dice with numbers form 1 to 6.

2. Make a tree diagram to show all the possible outcomes of spinning a spinner (equal parts of red, white, and blue) and rolling a number cube (1 to 6).