Name: .... Class: ....

Counting Principle

In counting principle, you multiply the number of choices to find the total number of posibilities.

1. Lily Wants to make a short drama. There are 7 leading actors and 6 leading actresses to choose from a casts. How many different ways can Lily cast this short drama.

2. A restaurant has four types of pizza in 7 different sizes. How many different pizzas can someone buy?

3. Richard is preparing to go out with his friends. He pulled out 3 shirts, 4 pairs of pants and 4 4 pairsof shoes to choose an outfit from. How many different outfits can he get?

4. Pertra had to go on a rescue mission in the jungle to look for her friends. She had 7 fireworks of different colors to send a signal to a stand by team in case of any problems. How many different signals can be generated if a signal requires the use of 2 fireworks of different colors at once?

mathskills4kids

Name: .... Class: ....

Counting Principle

In counting principle, you multiply the number of choices to find the total number of posibilities.

1. **Lily Wants to make a short drama. There are 7 leading actors and 6 leading actresses to choose from a casts. How many different ways can Lily cast this short drama.**

Multiply 7 leading actors by 6 leading actresses

$7 \times 6 = 42$

So, Lilly can cast the short drama in 42 different ways.

2. **A restaurant has four types of pizza in 7 different sizes. How many different pizzas can someone buy?**

In counting principle, you multiply the number of choices to find the total number of posibilities.

There are 4 types of pizzas and 7 different sizes to choose from

So multiply

$7 \times 4 = 28$ So, there are 28 different pizzas someone can buy.

3. **Richard is preparing to go out with his friends. He pulled out 3 shirts, 4 pairs of pants and 4 4 pairsof shoes to choose an outfit from. How many different outfits can he get?**

There are 3 shirts, 4 pairs of pants and 4 pairs of shoes to choose from

Multiply : $3 \times 4 \times 4 = 48$

So, Richard can get 48 different outfits.

4. **Pertra had to go on a rescue mission in the jungle to look for her friends. She had 7 fireworks of different colors to send a signal to a stand by team in case of any problems. How many different signals can be generated if a signal requires the use of 2 fireworks of different colors at once?**

We have to choose 2 fireworks

After selecting the first, we cannot choose the same color of firework again

Number of ways of selecting the second firework = 6

We multiply 7 by 6 since we have to choose 2 fireworks

$7 \times 6 = 42$

So, 42 different signals can be generated from the use of two fireworks