

1 → 12 → 10 → 8 → 9 → 3 → 11 → 6 → 4 → 7 → 2 → 5

STATION 1

A restaurant offers four sizes of pizza, two types of crust, and eight toppings.
How many possible combinations of pizza with one topping are there?

If 64 ... go to Station 12

If 14 ... go to Station 5

If 128 ... go to Station 8

STATION 2

How many ways can 5 paintings be lined up on a wall?

If 3125 ... go to Station 11

If 120 ... go to Station 5

If 25 ... go to Station 10

STATION 3

PA license plates have 3 letters followed by 4 digits. If the same letter CANNOT be repeated, how many license plates can be made?

If 118 ... go to Station 1

If 78,624,000 ... go to Station 4

If 156,000,000 ... go to Station 11

STATION 4

Andy has asked his girlfriend to make all the decisions for their date on her birthday. She will pick a restaurant and an activity for the date. Andy will choose a gift for her. The local restaurants include Mexican, Chinese, Seafood, and Italian. The activities she can choose from are Putt-Putt, bowling, and movies. Andy will buy her either candy or flowers.

If 9 ... go to Station 12

If 24... go to Station 7

If 12... go to Station 9

STATION 5

A travel agent plans trips for tourists from Chicago to Miami. He gives them three ways to get from town to town: airplane, bus, train. Once the tourists arrive, there are two ways to get to the hotel: hotel van or taxi. How many different ways can they arrive at the hotel?

If 6... go to Station 1

If 5... go to Station 3

If 108 ... go to Station 7

STATION 6

A lock has four dials. On each dial are the digits 0 to 9. How many possible combinations are there?

If 10,000 ... go to Station 4

If 6561 ... go to Station 10

If 5040 ... go to Station 2

STATION 7

You are playing Monopoly with your four friends (for a total of five players). There are 10 different game pieces. How many possible ways could players choose their game piece?

If 30,240... go to Station 2

If 3,628,800 ... go to Station 8

If 120 ... go to Station 5

STATION 8

How many 6-letter “words” can be formed from the letters in the word FRIDAY?

If 156 ... go to Station 1

If 720 ... go to Station 9

If 7,776 ... go to Station 3

STATION 9

Nine students hold a meeting in a room with four chairs. How many different ways are possible for the students to be seated?

If 6,561 ... go to Station 11

If 3,024 ... go to Station 3

If 36 ... go to Station 5

STATION 10

Mr. Frees has 11 stuffed animals and likes to line up 3 of them on his nightstand to look at when he goes to bed. How many different ways can he do this?

If 33 ... go to Station 4

If 990 ... go to Station 8

If 1331 ... go to Station 12

STATION 11

Each question on a five-question multiple-choice quiz has answer choices labeled A, B, C and D. How many different ways can a student answer the five questions?

If 1024 ... go to Station 6

If 625 ... go to Station 7

If 20... go to Station 9

STATION 12

A baseball glove manufacturer makes gloves in four different sizes, three different types by position, two different materials and two different levels of quality. How many different gloves are possible?

If 48 ... go to Station 10

If 24... go to Station 1

If 11... go to Station 4

TRAIL ACTIVITY

Record your path below.

_____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____ → _____

SHOW YOUR WORK!

1. $4 \cdot 2 \cdot 8 = \boxed{64}$

2. $5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = \boxed{120}$

3. $26 \cdot 25 \cdot 24 \cdot 10 \cdot 10 \cdot 10 \cdot 10$
 $\boxed{156,000,000}$

4. $4 \cdot 3 \cdot 2 = \boxed{24}$

5. $3 \cdot 2 = \boxed{6}$

6. $10^4 = \boxed{10,000}$

7. $10 \cdot 9 \cdot 8 \cdot 7 \cdot 6 = \boxed{30,240}$

8. $6 \cdot 5 \cdot 4 \cdot 3 \cdot 2 \cdot 1 = \boxed{720}$

9. $9 \cdot 8 \cdot 7 \cdot 6 = \boxed{3024}$

10. $11 \cdot 10 \cdot 9 = \boxed{990}$

11. $4^5 = 2 \cdot \boxed{1224} \cdot 1$

$\boxed{48}$

