Activity 6-1 (4 Aug 2022)

1 The new kWatch smartwatch comes in many configurations. You can choose the face size of 1 inch or 2 inches. For the case, there are 3 options: steel, aluminium and gold. For the watch band, there are 20 options. In how many ways can you configure your new kWatch?

2. You have 5 different T-shirts and 4 different shorts. Every T-shirt can be used with any shorts except the special one from 2564III shop. It has to go with the only one bright blue short that you have. In how many ways can you wear these T-shirts and shorts?

3. [LPV] *n* boys and *n* girls go out to dance. In how may ways can they all dance simultaneously? (We assume that only couples of different gender dance with each other.)

Activity 6-2 (4 Aug 2022)

4. (LPV1.5.5) There are 20 different presents. We want to give all of them to 12 children. Each children can get any number of presents (maybe 0), and we may give all presents to one child. In how many ways can we distribute these presents?

5. (LPV1.5.6) There are 20 flavors of ice cream. There are 12 children. Each child can have as many ice cream as she or he wants, but she or he cannot have more than one scoop of each flavor. It is possible that some child does not want any ice cream. In this problem, the order that a child has an ice cream does not matter, i.e., a having a scoop of chocolate and a scoop of vanilla ice cream is the same as having a scoop of vanilla and a scoop of chocolate ice cream. In how many ways can these children have ice cream?