

Student: _____

Class: _____

Date: _____

How effort affects your brain

Student Activity Sheet 3; use with *Exploring* "Exploring solution strategies"

Use this chart for all of the Fun Park problems.

| Fun Park Prices | |
|-------------------------------|-----------|
| Ticket Book (24 tickets/book) | \$18.00 |
| Individual tickets | \$1.00 |
| Activities and Refreshments | |
| Miniature golf game | 3 tickets |
| Go-cart ride | 4 tickets |
| Video game | 1 ticket |
| Laser tag game | 6 tickets |
| Soft drink | 1 ticket |
| Popcorn | 1 ticket |
| Hotdog | 2 tickets |
| Nachos | 2 tickets |

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Dawn and 7 of her friends are going to Fun Park for her birthday party. Dawn purchases 3 Fun Park ticket books. There are 24 tickets in each book. Dawn and her friends look over the activity and refreshment choices. They decide what they will do while at Fun Park.

1. Dawn and her friends decide to use all of their tickets on miniature golf. They want to share everything equally, so they will each play the same number of games. How many games of miniature golf can each of them play?

$$3 \text{ books} \cdot 24 \text{ tickets per book} = 72 \text{ total tickets}$$

$$72 \text{ tickets} \div 8 \text{ people} = 9 \text{ tickets per person}$$

$$9 \text{ tickets} \div 3 \text{ tickets per game} = \boxed{3 \text{ games per person}}$$

2. Dawn and her friends decide not to play the last round of golf. They divide the remaining tickets equally among themselves and head to the snack shack. How many of each type of snack could one friend buy with his or her tickets?

$$8 \text{ friends} \cdot 3 \text{ tickets saved} = 24 \text{ tickets left over.}$$

$$24 \text{ tickets} \div 8 \text{ people} = 3 \text{ tickets for each person}$$

Lots of combinations,

Example: 1 popcorn, 1 nacho

OR

3 popcorns, etc.

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3. Reflect on the solution strategies you used in solving the Fun Park problems.

- a. First, you were able to decide how many games of miniature golf Dawn and her friends would be able to play. What information did you need to solve that problem? How did you solve the problem?

Needed: # of friends
Total # of tickets
Cost of mini golf

I did total # of tickets
divided by # of friends
divided by cost of mini golf.

- b. Next, you were told that the friends decided not to play the last round of golf. How did you decide which choices each friend selected as a snack?

Each round of golf costs
3 tickets, so I thought
of combinations of snacks
that cost 3 tickets.

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Dion bought tickets for the park, so he and his friends would each have the same number of tickets. There are enough tickets so that each person can ride the go-carts 1 time, play 3 video games, and play laser tag twice.

4. If the go-cart attendant collects 36 tickets from the people in Dion's group, how many people are in Dion's group?

$$36 \text{ tickets} \div 4 \text{ tickets per go cart} = 9 \text{ people}$$

5. How many total tickets are collected from Dion's group by the laser tag and video game attendants?

Laser tag costs 6, video games cost 1.
 3 video games cost 3, 2 laser tags costs 12.
 So $3 \cdot 9 = 27$ for video games, $12 \cdot 9 = 108$ for laser tags

6. When Dion purchased the tickets, he realized he could purchase ticket books, individual tickets, or a combination of books and individual tickets. Dion figured out the least expensive way to buy tickets for his group. What was the least expensive way? What was the total cost?

He needs a total of:

$$\begin{array}{r} 36 \\ + 27 \\ + 108 \\ \hline 171 \text{ tickets} \end{array}$$

$$171 \div 24 \text{ tickets per book} =$$

7 books
 $7 \cdot 24 = 168$ tickets from books,
 So Dion bought 7 books & 3 individuals