Pick a Tile

This problem give you the chance to:
- interpret probability information
- solve a probability problem in context

Name:

Date: Period:

Gina has a bag containing Red, Green, Blue, Yellow, and White tiles.

If someone picks a tile without looking:
- The probability of picking a Red tile from the bag is one half.
- The probability of picking a Green tile is half the probability of picking a Red tile.
- Blue, Yellow, and White tiles have an equal probability of being picked.

1. (a) Use this information to complete the table.

         Show how you arrived at your answers.

Color	Red	Green	Blue	Yellow	White
Probability	$\dfrac{1}{2}$				

    (b) Complete the table. How many tiles are there all together? _____

         Show how you arrived at your answers.

Color	Red	Green	Blue	Yellow	White
Number of Tiles		24			

Gina wants to raise funds for her math club at school – the club members are planning a field trip to the Exploratorium.

She plans to charge 10¢ to pick a tile from her bag without looking.
The students playing the game can win:
- 20¢ for picking a Blue tile
- 50¢ for picking a Yellow tile
- $1 for picking a White tile
- Nothing if a Red or a Green tile is picked

2. (a) Explain why Gina will lose Money with this game.

(b) How much should Gina charge to pick a tile so that she can make money from her game?

(c) Explain how Gina can change her game so that she can still charge 10¢ and make money?