Discount: A Consumer Math Game

Object of the Game

The object of *Discount* is to make wise purchases by evaluating percentage and fractional discounts and keep accurate records of transactions. The winner is the player who save the most money on purchases and whose Financial Record is 200% accurate.

Introduction

Discount simulates more than 400 real-world problems. The game format moves learning well beyond what textbooks can provide. Because the sequence of problems is unpredictable, players must weigh possible consequences when making their decisions. Reconciling financial records and making correct payments are additional differentiating experiences. Players use calculators as they change fractions and percentages to decimals. For example; 1/3 translates to 0.333 and 45% translates to 0.45.

Let's observe the mathematics involved as two players take their turns. Player A: The spinner rests on green and the pawn moves to "20% Discount." The green floor lamp card is drawn with a cost of $126. The player translates 20% to 0.20 and calculates the savings ($126 x 0.20 = $25.20), then rounds to $25. Player A subtracts $25 from $126 to get the sale price, $101, and pays with the correct currency such as five $20 bills plus one $1 bill.

Player B: The spinner rests on blue and the pawn is moved to "1/3 Off." The blue clock radio card is drawn showing a price of $49. Player B figures the savings ($49 divided by 3 = $16.33 or $49 x 0.333 = $16.32), then rounds this amount to the nearest dollar, $16. The player subtracts $16 from $49 to determine the $33 sale price and uses currency to pay the banker, for example, three $10 bills plus three $1 bills or $40 - $7 change.

Just as in business, 100% accuracy is essential. At the end of the game, players check the accuracy of their Financial Records with this formula:

Sale Price Total + Ending Cash = Beginning Cash

The stimulating context of this game, combined with applications to real life, provides a motivating way to teach these basic concepts and skills.

Mathematics Standards

Discount supports state and national standards. You are encouraged to correlate the game content with the number and operations standards of your state. For comparison with national standards, consult www.nctm.org or www.corestandards.org/math.

Key objectives:

- Solve multi-step, real-world problems involving percentages
- Translate between fractions, percentages and decimals (1/2 = 50% = 0.50)
- Compute percentage and fractional discounts using a calculator
    - Add when totaling columns and gathering currency for payment
    - Subtract when determining the sale price and change.

Management

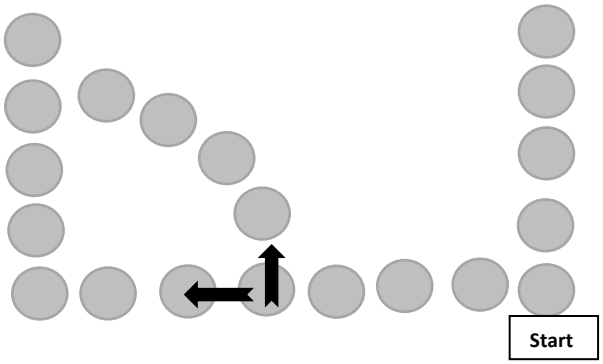
1) Calculators are highly recommended, particularly for the banker who will be checking all computations. If calculators are not used, provide scratch paper for each player to make computations. Have players round computations to the nearest dollar.
2) Cut the Financial Record sheet in half and give one piece to each player.

Set Up

1) Place the Appliance, clothing and Furniture Cards face down in their respective spaces.
2) Deal $2000 to each player in the denominations him or her requests. To shorten the game, decrease the amount.
3) Distribute a Financial Record to every layer. Each one should enter the amount of cash received in the box labeled Beginning Cash.
4) Appoint a person, preferably a non-player, to be the banker. The banker collects and dispenses money and checks the accuracy of each player's calculations.
5) Spin to determine the order of play, with the highest number going first.
6) Have each player choose a pawn and place it on Start.

How to Play

1) Travel clockwise around the board. At two board junctions, plyers can choose to follow either the outer or inner path after deciding the best outcome. (See Diagram Below)
2) During each turn, spin and move forward the number of spaces shown.
3) If the pawn lands on a discount space, the spinner color indicates the sale to consider (blue for appliances, red for clothing and green for furniture). The player must decide whether or not to make the purchase *before* taking the appropriate card. If the decision is *no*, the turn ends. If the decision is *yes*, take a card.
4) Write the information in the Financial Record, compute and round the amount saved to the nearest dollar, pay the sale price to the banker, and return the card face down to the bottom of the stack. Fractional discounts are recorded as percentages.



DISCOUNT Financial Record

Beginning Cash

Name_____ $2000

Description	Regular Price	% Discount	Amount Saved	Sale Price
Toaster	$65	25%	$16	$49
Computer Desk	$345	15%	$52	$293
Overcoat	$155	10%	$16	$139

5) The game continues until a player does not have enough money to make a given purchase. After the other players finish the round, everyone should check the accuracy of their Financial Records by completing the formula at the bottom of the page:

Sale Price Total + End Cash = Beginning Cash

6) The winner is the player who saves the most money on purchases (Amount Saved) and whose Financial Record is 100% accurate. If a player is disqualified because of an error, check the record of the next highest saver until a winner is determined.