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- **Market Setup:** There will be 26 participants in this market. Each person is endowed with **\$225.00** in cash and **6** shares of a durable asset that can be bought or sold.
- **Dividends:** All asset shares owned at the end of each period will pay a dividend (explained below). The dividends may not be known in advance.
- **Periods:** The market consists of exactly **12 trading periods** or "rounds". All asset shares that you own (from endowment or purchases) at the end of the final trading period (after dividends are paid) will be redeemed for **\$14.00** each.
- **Earnings:** In addition to cash receipts from dividends, your cash balance will be altered as you buy and/or sell shares. Transactions will be executed for you based on "limit orders" to buy or sell that you may submit at the beginning of a trading period, as explained below.

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- **Earnings on Investments:** Dividends will be paid on all shares owned after trading in a round is complete.
- **Dividends:** Each share held at the end of a trading period will pay a dividend that depends on the outcome of a random process. The computer will select a random number from 1 to 10, with each integer in this interval being equally likely. This random "state" determines which column of the Dividend Table (below) is relevant. Thus each of the dividend amounts listed in the bottom row of the table are equally likely to be earned on each share that you own.

Random Determination of Dividends per Share

Random State:	1	2	3	4	5	6	7	8	9	10
Share Dividend:	\$1.20	\$1.20	\$1.20	\$1.20	\$1.20	\$1.60	\$1.60	\$1.60	\$1.60	\$1.60

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- **Limit Orders to Buy or Sell:** At the beginning of a trading period, those with cash who wish to purchase shares will indicate the number of shares desired and the maximum or "limit" price that they are willing to pay. Similarly, those who wish to sell shares will indicate the number of shares offered and the minimum "limit" price that they are willing to accept.
- **Buy and Sell Orders:** The same person may offer to buy and sell shares, but the **buy price** or "bid" must be below the **sell price** or "ask," so you cannot sell to yourself.

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- **Arranging Trades:** Trades are possible if some of the sell order prices (asks) are below some of the buy order prices (bids). The market maker is a computer program that will organize the buy and sell orders and use these to determine a market-clearing price. Ask prices that are too high (above the clearing price) and bid prices that are too low (below the clearing price) will be rejected.
- **Market Clearing:** All transactions will be at the **same** "market-clearing" price. This will be a price such that the number of shares that traders wish to buy is equal to the number of shares that traders wish to sell. In other words, the number of shares with limit sell prices (asks) at or below this clearing price is equal to the number of shares with limit buy prices (bids) at or above this clearing price. Thus, those who are willing to pay the most will buy from those who are willing to sell for the least, but all trades will be at the same price.

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Random Determination of Dividends per Share

Random State:	1	2	3	4	5	6	7	8	9	10
Share Dividend:	\$1.20	\$1.20	\$1.20	\$1.20	\$1.20	\$1.60	\$1.60	\$1.60	\$1.60	\$1.60

- **Example 1:** Suppose that a person begins a round with **\$20** in cash and **3 shares**. If this person makes no purchases or sales, then the person's cash position would remain unchanged.
  - If the randomly determined dividend turned out to be **\$1.20**, then the total dividend income would be  $3 \times \$1.20 = \mathbf{\$3.60}$ .
  - Similarly, if the randomly determined dividend turned out to be **\$1.60**, then the total dividend income would be  $3 \times 1.60 = \mathbf{\$4.80}$ .
- **Example 1 (continued):** If the person who started with 3 shares and \$20 were to purchase a share for \$P in the trading period, then this person would earn a dividend on 4 shares, and these 4 shares would make up the person's portfolio at the start of the next period. The amount of cash carried over to the next period would be the initial cash \$20, minus the cost of the purchase plus the dividends on the 4 shares.

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Instructions Summary (ID = )

Random Determination of Dividends per Share

Random State:	1	2	3	4	5	6	7	8	9	10
Share Dividend:	\$1.20	\$1.20	\$1.20	\$1.20	\$1.20	\$1.60	\$1.60	\$1.60	\$1.60	\$1.60

- You will begin with an initial cash account of **\$\*. \*\*** and with **\*\* shares** of a stock with dividends determined by a randomly generated number as shown above, with each of the 10 columns in the dividend table being equally likely.
- Shares can be bought or sold by placing limit orders, which are executed at a single market-clearing price selected to equalize the number of shares demanded (with bids above the price) and the number of shares offered (with asks below the price).
- Each share owned at the end of a period (after trades have been executed) will pay a randomly determined dividend.
- Your cash balance will decrease if you purchase shares, and it will increase as you receive dividends, and as you sell shares or redeem them in the final period. The computer will keep track of your cash and share accounts, and your final earnings will equal your cash balance in the final period after any shares you have are redeemed. and after final dividend and interest payments have been made.
- This experiment consists of exactly **12 trading periods**, and all shares owned at the end of the final trading period (from your endowment or obtained by purchase) will be redeemed for **\$14.00** each.
- **Cash Conversion:** Each **\$1.00** in earnings for the experiment will be converted into **\$1.00** in cash payments to you at the end.
- **Final Task:** There will also be a short task in which you can check one or more "boxes" to pick up cash that is paid AFTER the end of the last round of trading. This final cash payment will **NOT** be converted down, it will be paid dollar for dollar at the end of the experiment, and will NOT affect your earnings from the market trading in any way. Instructions for this task will be provided when you come to it.

Finished with Instructions