

Name:

Date:

Class:

## Inventory Math

### Skill:

- Analysis (AN)

### Time on Task:

- 10–15 minutes

### Goal/Purpose:

- The goal of this activity is to calculate the cost of goods sold and rate of inventory turnover.

*Solve each of the following equations the problems listed below. Your instructor will inform you about the appropriate method of submission. For reference, the formula for calculating the cost of merchandise sold, as well as the formula for turnover rate, is shown below.*

### Calculating Cost of Merchandise Sold

Value of merchandise + purchased made = total merchandise

Total merchandise – ending inventory = cost of merchandise sold

Step in equation	Example value
Merchandise inventory	\$80,000
Purchases made during the year	\$75,000
Total merchandise available for sale	\$155,000 (\$80,000 + \$75,000 = \$155,000)
Ending inventory	\$30,000
Cost of merchandise sold	\$125,000 (\$155,000 – \$30,000 = \$125,000)

### Calculating Turnover Rate

Cost of goods sold ÷ average inventory = turnover rate

Step in equation	Example value
Cost of goods sold	\$125,000
Average inventory	\$50,000
Turnover rate	2.5

	$(\$125,000 \div \$50,000 = 2.5)$
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### Student Equations

1. A clothing store had a beginning inventory of \$55,000 on January 1, 20XX. The merchandising manager purchased \$250,000 of merchandise for the first three months of the year. On March 31, the store took inventory and calculated an ending inventory of \$35,000. Using the formula referenced above, what is the cost of merchandise sold?

Answer:

2. Using the information for the clothing store in the previous question, calculate the turnover rate, assuming an average inventory of \$76,250.

Answer:

3. With \$31,039 worth of merchandise on hand, Athena is concerned that her sporting goods store will run out of merchandise ahead of the city's spring festival. She has asked you to determine the inventory they should have on hand. The following list identifies how much Athena made in sales over the last five spring festivals. Use this information to calculate an average amount of inventory. Then, determine if Athena has enough merchandise on hand for the festival.

- Year one: \$25,603
- Year two: \$30,785
- Year three: \$32,097
- Year four: \$33,515
- Year five: \$32,419

Answer: