Guess What! (Estimating and Calculating)

Suggested time: 45 minutes

What's important in this lesson:
It is important for you to fully understand the difference between the process of estimating and of calculating the actual amount. It is important for you to understand when estimating is appropriate.

Complete these steps:

1. Read through the Lesson portion of the package independently.
2. Complete the required 'Practice' questions.
3. Seek assistance from teacher as needed. If you have questions about the examples or the 'Practice' questions.
4. Use 'Practice' Answer Keys to check their answers as they work through the package. If you are making errors, have your teacher review these questions with you.
5. Complete the Estimating and Calculation Money Assignment

Hand-in the following to your teacher:

1. Practice Problems from the Student Handout.
2. Estimating and Calculating Money Assignment

Questions for the teacher:

Guess What!
Estimating and Calculating Addition

For this lesson, sales taxes do not need to be calculated!

Part A – Estimating to the Nearest Dollar

Example

1. ESTIMATE and CALCULATE the total bill of the following list of items:

    sandwich - $2.95
    bottle of water - $1.14
    salad bar - $4.75

Estimate	Calculation
We must ROUND first! How do we know where to round? In this case, we should round to the nearest ONE DOLLAR, since the numbers are small. $3 + $1 + $5 = $9 (approximately)	For the TOTAL, just ADD all of the items, using a calculator! $2.95 $1.14 + $4.75 $8.84

2. Are your estimates and your answers close?

    You should ALWAYS check to see that your estimation and your calculated answer are close to each other! In this case, $9 is very close to $8.84!

    A good estimate will be both EASY to find AND CLOSE to the answer!

Practice Problems

1. ESTIMATE by rounding to the NEAREST DOLLAR, then CALCULATE each the total cost of each list of items:

    a.   **ESTIMATE**   **CALCULATION**
        magazine -$3.90
        book   - $7.23
        pens   - $1.84

b.   **ESTIMATE**   **CALCULATION**

    pack of gum -$0.89
    birthday card - $2.77
    book - $9.95
    key chain- $4.19

CHECK: Was you ESTIMATE close to your CALCULATION? _____

Part B – Rounding to the Nearest $10, $100…

Sometimes, we should round to the NEAREST $10, or the NEAREST $100, etc...

Example

1. Consider this list of items:

    portable CD player - $138.95
    CD - $19.20
    Headphones - $31.50

Estimate	Calculation
DON'T round to the nearest ONE DOLLAR! (Adding $139 + $19 + $32 isn't much easier than CALCULATING the exact value!) Instead, Round to the nearest TEN DOLLARS: $140 + $20 + $30 = $190 (approximately)	$138.95 $19.20 +$31.50 $189.65

2. Are these two values close? **YES!**

3. You have just won a shopping trip at a sporting goods store. Here's what you buy:

    How should we ROUND here?

    bicycle - $462.50
    skiis -$732.99   NEAREST DOLLAR? – $463+$733+$1285+$228?
    golf clubs - $1,285.00
    Skates - $227.95   NEAREST $10? – $460+730+1290+230?

    Neither of these ideas is much simpler than CALCULATING!

Estimate	Calculation
Rounding to the nearest $100 will help. $500 $700 $1300 +$200 $2700	$462.50 $732.99 $1285.00 + $227.95 **$2708.44** **Sometimes these are very close!**

Practice Problems

1. ESTIMATE by rounding, then CALCULATE each the total cost of each list of items:

   a. (to the nearest $100)
       motorcycle - $4675.52
       helmet - $315.99
       gloves - $107.85

   ESTIMATE   CALCULATION

   b. (to the nearest $10)
       motorcycle - $4675.52
       helmet - $315.99
       gloves - $107.85

   ESTIMATE   CALCULATION

2. Now, which one of these ESTIMATES was...

   b. easier?

   c. most accurate?

   Check the answers to these questions before moving on!

Estimating and Calculating Money Assignment

ESTIMATE, then CALCULATE the total of each list.
Be sure to follow the ROUNDING instructions for each question.
REMEMBER - Always compare the two values to see if your estimate was close!

1. (nearest $10)

dog food - $48.50
leash - $8.89
dog - $211.75

Estimate	Calculation

2. (nearest $1)

can of pop - $1.39
peanuts - $3.67
pretzels - $0.89
magazine - $2.05

Estimate	Calculation

3. (nearest $100)

table - $89.33
chair - $265.99
couch - $1838.75

Estimate	Calculation