Station 1 - Estimating

Directions: Please estimate the following using all 3 strategies. Remember - estimate to the largest place value of the smallest number.

23,476 + 9,687

1. Rounding -

2. Compatible numbers -

3. Front-end estimation -

Which of these ways was most accurate?

Solve normally - add the original numbers:

*<u>Directions:</u> Use rounding to the greatest **place value** for the following and solve.*

2. 36,420 + 43,287

3. 8,329 + 9,320

*Directions: Round to the **nearest thousand** and solve.*

4. 45,480 + 67,560

Station 1 - Estimating

Answer Key

Directions : Please estimate the following using all 3 strategies.

23,476 + 9,687 (Use the largest place value of the smallest number.)

1. Rounding - 23,000 + 10, 000 = 33,000
2. Compatible numbers - 25,000 + 10,000 = 35,000
3. Front-end estimation - 23,000 + 9,000 = 32,000

Which of these ways was most accurate? Rounding

Solve normally: 33,163

*Directions: Use rounding to the **greatest place value** for the following and solve.*

2. 36,420 + 43, 287

40,000+ 40,000 = 80,000

3. 8,329 + 9,320

8,000 + 9,000 = 17,000

*Directions: Round to the **nearest thousand** and solve.*

4. 45,480 + 67,560

45,000 + 68,000 = 113,000

Station 2 - Problem Solving

Use the UPSL method below to solve each problem.

Understand - What do you know or notice? What do you need to find out?	**Plan -** What strategy/strategies will you use to solve the problem?
Solve - Estimate the total first, then show your solution.	**Look Back -** Does your answer make sense? Is it close to your estimate? Did you include all parts of the answer?

Sophia had collected 45 swimming ribbons. This season, she earned 12 more through her high school swim team, and 14 more from the YMCA swim team. She lost 3 of them in her swim bag, and dropped 5 of them outside. She earned 3 medals. How many swimming ribbons does she have left?

Tim, Dave, and Rosa participated in a biking challenge throughout the year. Tim rode 5,340 miles. Dave rode for 346 miles fewer than Tim. Rosa and Dave rode for the same number of miles. How many miles did they bike altogether?

Look at the table.

Cost of Tools at Three Stores

Store	Chain Saw	Electric Drill
Home Shop	$447	$101
Slowe's	$451	$112
Mace Hardware	$426	$115

What would be the least amount of money Dad could spend if he bought one of each type of tool?

Station 2 - Problem Solving

Answer Key

Use the UPSL method below to solve each problem.

Understand - What do you know or notice? What do you need to find out?	**Plan -** What strategy/strategies will you use to solve the problem?
Solve - Estimate the total first, then show your solution.	**Look Back -** Does your answer make sense? Is it close to your estimate? Did you include all parts of the answer?

Sophia had collected 45 swimming ribbons. This season, she earned 12 more through her high school swim team, and 14 more from the YMCA swim team. She lost 3 of them in her swim bag, and dropped 5 of them outside. She earned 3 medals. How many swimming ribbons does she have left?

Please make sure to use all of the UPSL steps on these problems. These are the "solve" step only.

45 + 12 + 14 - 3 - 5 = 63 ribbons

Tim, Dave, and Rosa participated in a biking challenge throughout the year. Tim rode 5,340 miles. Dave rode for 346 miles fewer than Tim. Rosa and Dave rode for the same number of miles. How many miles did they bike altogether?

Tim - 5,340
Dave - 5,340 - 346 = 4,994
Rosa - 4,994
Total - 5,340 + 4,994 + 4,994 = 15,328 miles

Look at the table.

Cost of Tools at Three Stores

Store	Chain Saw	Electric Drill
Home Shop	$447	$101
Slowe's	$451	$112
Mace Hardware	$426	$115

What would be the least amount of money Dad could spend if he bought one of each type of tool?

426 + 101 = $527 (Find the least expensive chain saw and electric drill and add them together.)

Station 3 - Computation

Add or subtract each equation. Pay attention to the operation!

5,000 - 2,067 =

15,075 - 3,069 =

28,487 + 19,619 =

3,096 + 885 =

Look at the solutions to the problems above. Which problems have an answer of:

- Between 3,000 to 4,000?
- A little less than 3,000?
- A little more than 12,000?

If you have extra time, make addition or subtraction equations for your partner to solve.

Station 3 - Computation

Answer Key

Add or subtract each equation. Pay attention to the operation!

5,000 - 2,067 = 2,933 (You can check using addition: 2,933 + 2,067 = 5,000

15,075 - 3,069 = 12,006 (You can check using addition: 12,006 + 3,069 = 15,075)

28,487 + 19,619 = 48,106

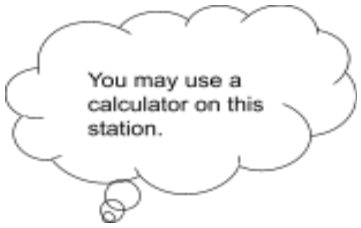
3,096 + 885 = 3,981

Look at the solutions to the problems above. Which problem have an answer of:

- Between 3,000 to 4,000? 3,096 + 885
- A little less than 3,000? 5,000 - 2,067
- A little more than 12,000? 15,076 - 3,069

If you have extra time, make a similar problem for your partner to solve.

Station 4 - Review



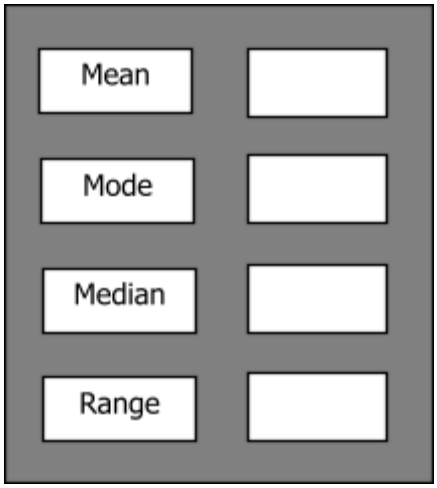
1. In which data set does the range have the greatest variation?

A. 15, 24, 12, 14, 14
B. 10, 18, 7, 14, 16
C. 10, 11, 12, 13, 14, 15, 17
D. 6, 18, 13, 15, 17, 20, 23

2 . Look at the following prices for winter coats.

$125, $230, $320, $275, $125

Determine the value for each statistical measure.



3. Create a stem-and-leaf plot to show the math grades for Billy. His scores are as follows: 86, 94, 74, 100, 91, 81, 85, 70, 79 , 73, 99. You can do this problem off to the side of number 4 for more room.

4. Convert the following mixed numbers to improper fractions or visa versa.

Mixed Number	Improper fraction
$4\ 7/8$	
	$\frac{14}{5}$
	$\frac{27}{5}$

Station 4 - Review

Answer Key

1. In which data set does the range have the greatest variation? Variation means greatest difference.

A. 15, 24, 12, 14, 14 (24 - 12 = 12)
B. 10, 18, 7, 14, 16 (18 - 7 = 11)
C. 10, 11, 12, 13, 14, 15, 17 (17 - 10 = 7)
D. 6, 18, 13, 15, 17, 20, 23 (23 - 6 = 17)

2 . Look at the following prices for winter coats.

$125, $230, $320, $275, $125

Determine the value for each statistical measure.

Mean	(125 + 230 + 320 + 275 + 125) ÷5 = 215
Mode	125 (only repeated number)
Median	230 (put numbers in order and find middle)
Range	320 - 125 = 195

3. Create a stem-and-leaf plot to show the math grades for Billy. His scores are as follows: 86, 94, 74, 100, 91, 81, 85, 70, 79 , 73, 99. You can do this problem off to the side of number 4 for more room. **Don't forget the title!** Put leaf numbers in order least to greatest. Don't accidentally skip numbers.

Billy's Math Grades

Stem	Leaf
7	0, 3, 4, 9
8	1, 5, 6
9	1, 4, 9
10	0

4. Convert the following mixed numbers to improper fractions or visa versa.

Mixed Number	Improper fraction
4 7/8	$\frac{39}{8}$
2 4/5	$\frac{14}{5}$
5 2/5	$\frac{27}{5}$