Decimals on the Number Line

The number line below shows decimal values between 1.0 and 2.0. Which number does point *P* represent?



Since the distance between 1.0 and 2.0 is divided into 10 equal parts, each part is one-tenth. Start at 1.0 and count up by tenths

until you reach point *P*. Point *P* is at _____.

Use the number line above to write the number for each point.

1. point *A* ______

2. point *B*_____

Use the number line below to write the number for each point.



5. point *E* _____

6. point *F*_____

Write Math Draw a number line from 1.88 to 1.89. Label the number 1.886 as point *X*. Explain your thinking.

Decimals as Scores

Four gymnasts competed in three events at a gymnastics meet. The table shows the gymnasts' scores.

Gymnast	Balance Beam	Uneven Bars	Floor Exercise
Cara	8.975	9.025	9.537
Addison	9.152	9.25	8.805
Shelby	8.575	9.375	8.75
Meg	9.5	8.85	9.05

Use the data in the table to answer the questions.

- **1.** Who earned a score of eight and five hundred seventy-five thousandths? In which event did she earn that score?
- **2.** Who earned a score of $9 \times 1 + 2 \times (\frac{1}{100}) + 5 \times (\frac{1}{1,000})$? In which event did she earn that score?
- **3.** Who earned a score with a 3 in the tenths place? In which event did she earn that score?
- **4.** Who earned a score of nine and five hundredths? In which event did she earn that score?
- **5.** Who earned a score with a 2 in the thousandths place? In which event did she earn that score?
- **6.** Who earned a score of $8 \times 1 + 8 \times (\frac{1}{10}) + 5 \times (\frac{1}{1,000})$? In which event did she earn that score?
- **7.** How many gymnasts earned a score in which one of the digits has a value of 0.07?

Order Your Own Decimals

Solve each problem. In each row, use each digit exactly once.

1. Place the digits 0, 2, 5, 8 in each row of the table to create four decimals that are in order from least to greatest.

Ones	Tenths	Hundredths	Thousandths
•			

2. Place the digits 1, 3, 6, 9 in each row of the table to create four decimals that are in order from greatest to least.

Ones of	Tenths	Hundredths	Thousandths
•			
•			
•	•		

3. Place the digits 0, 1, 4, 7, 8 in each row of the table to create four decimals that are in order from least to greatest.

Tens	Ones	Tenths	Hundredths	Thousandths
	•			
	•			
	•			

4. Place the digits 2, 3, 6, 8, 9 in each row of the table to create four decimals that are in order from greatest to least.

Tens	Ones of	Tenths	Hundredths	Thousandths
	•			
		•		

Decimal Round Up

- **1.** In circle A, write 9 decimals, with three decimal places, that when rounded to the nearest hundredth, round to 4.56.
- **2.** In circle B, write 9 decimals, with one decimal place, that when rounded to the nearest one, round to 7.
- **3.** In circle C, write 9 decimals, with two decimal places, that when rounded to the nearest tenth, round to 8.7.
- **4.** In circle D, write 9 decimals, with three decimal places, that when rounded to the nearest tenth, round to **1**.3.



Model Connection

Draw lines to match the addition expression shown in each rectangle with the model that represents its sum. Then write the sum on the line below the model.



- **1. Stretch Your Thinking** Write a decimal addition sentence whose sum could be represented by the model.
- 2. Write Math Explain the strategy you used to find the sum of three addends.



Model Building

Subtract 0.25 from each decimal represented by the models below. Then write the difference on the line provided.



- **1. Stretch Your Thinking** Without subtracting, how can you tell which decimal modeled above will have the least difference when you subtract 0.25 from it?
- 2. Write Math Write a decimal subtraction sentence whose difference is greater than the greatest difference you found above. Shade the model to show the difference.

_	_	_	 _	_	 _	_	_

PREMIUM

Driving Decimals

Round the number of miles driven each day to the nearest whole number. Write the estimated total for each person in the last column. Then use the data in the table to solve the problems.

Number of Miles Traveled						
Driver	Friday	Saturday	Sunday	Total Miles		
Mrs. McEnery	14.57	36.92	17.9			
Ms. Sanders	90.7	39.77	24.33			
Mrs. Adams	44.63	21.16	39.1			
Mr. Harrison	73.23	50.58	45.55			
Mr. Volga	68.85	32.46	62.12			

- On Friday, about how many more miles did Ms. Sanders drive compared to Mr. Volga?
- **3.** About how many more miles did the driver who traveled the greatest total distance drive than the driver who traveled the least total distance?
- **5.** What is the estimated difference between the driver who traveled the greatest distance in one day and the driver who traveled the least distance in one day?
- **7.** Estimate the total number of miles all five drivers traveled on Saturday.

- **2.** About how many more total miles did Mr. Harrison drive than Mrs. Adams?
- **4.** About how many miles did Mr. Volga drive on Saturday and Sunday?
- **6.** Estimate the difference between the greatest daily distance Mr. Harrison traveled and the least daily distance Mr. Harrison traveled.
- **8.** Write and solve your own estimation problem using the data from the table.

Sum Match-Up

Find the sum of the decimals shown on each cube. Then match each sum to the square with the correct sum.



5. Write Math Tell how you found the sum in Exercise 2.

6. Stretch Your Thinking Tell how you can check your answer for Exercise 4.

In the Box Decimals

For 1–6, find the unknown numbers that make the subtraction sentence true.



7. (Write Math >> Explain how to subtract decimals.

8. Stretch Your Thinking Tell how you can check your answer for Exercise 1.

Pattern Match

Write the letter of the sequence that matches each clue. Each sequence has 5 terms and is used exactly once. Then write the unknown terms in the sequence.

Clue	Sequence
 1. Start at 1.2, end at 10.	a. 1.2, 1.15,,,,
 2. Start at 8, add 0.3.	b. 6, 9.5,,,,
 3. Start at 8.02, end at 8.22.	c. , 4.8,, 4.4,
 4. Start at 4, subtract 0.02.	d. 1.2, 3.4,,,,
 5. Start at 1.2, subtract 0.05.	e. 8.08,,, 8.02,
 6. Start at 5, end at 4.2.	f. , 8.3,, 8.9,
 7. Subtract 2.4, end at 10.	g. 8.02, 8.07,,,,
 8. Add 3.5, end at 20.	h. , 3.98,, 3.94,
 9. Subtract 0.02, end at 8.	i. , 14.6,,, 13.4
 10. Start at 15, subtract 0.4.	j. 19.6,,, 12.4,

11. Write Math Explain how you found the matching sequence in Exercise 6.

Lesson 3.II Enrich

Balancing Act

Make and complete a table to solve.

 Felicia wants to buy a new soccer ball. It is on sale for \$12.60. She has one \$10 bill, two \$5 bills, three \$1 bills, 6 quarters, and 3 nickels. Make a table to find four ways she could pay for the soccer ball.

 Since his January statement, Mr. Park has written two checks for \$6,098.11 and \$3,876.99 and made a deposit. His January statement shows a balance of \$12,897.55, and his checkbook balance shows he currently has \$6,984.85.

Balancing Mr. Park's Checkbook					
January balance					

How much did Mr. Park deposit? _____

3. Mrs. Chen wrote two checks and made a deposit of \$1,987.09 since her October statement. The October statement shows a balance of \$3,611.08, and her checkbook balance shows she currently has \$2,778.69. What is the total amount of the checks

Balancing Mrs. Chen's Checkbook					
October balance					

that Mrs. Chen wrote? _____

4. Stretch Your Thinking Explain how you could use another strategy to solve Exercise 3.

Decimal Dance

Use mental math, place value, or a calculator to solve 1–12. Write each sum or difference in the top box of the next column until you finish the last exercise in each row.



13. Write Math What if the first number in Exercise 1 were 8.39? How would the sums and differences in the first row change?