

10-18-17

Aim: SWBAT round and compare decimals.

HW: [Worksheet \(both sides\)](#)

Do Now: **Communicate.**

What are the rules regarding rounding?

What are the similarities and differences between rounding to a whole number and rounding to a decimal digit?

	,			,			,			.							
B i l l i o n s		H u n d r e d M i l l i o n s	T e n M i l l i o n s	M i l l i o n s	H u n d r e d T h o u s a n d s	T e n T h o u s a n d s	T h o u s a n d s	H u n d r e d s	T e n s	O n e s		T e n t h s $\frac{1}{10}$	H u n d r e d t h s $\frac{1}{100}$	T h o u s a n d t h s $\frac{1}{1,000}$	T e n T h o u s a n d t h s $\frac{1}{10,000}$	H u n d r e d T h o u s a n d t h s	M i l l i o n t h s $\frac{1}{1,000,000}$
																	$\frac{1}{100,000}$

- There is no such thing as a "oneths" place!!!!
- Commas only exist on the left side (whole numbers side) of the decimal point.
- Commas are inserted every three numbers from right to left.
- Adding zeros behind the last decimal digit does not change the number's value.

Rounding: reducing the digits in a number while trying to keep its value similar.

- the result is less accurate, but easier to understand

Rounding UP: Increasing a specific digit by 1.

- when the digit to the right of the place you are rounding to is 5 or higher.

Rounding DOWN: Keeping a specific digit the same.

- when the digit to the right of the place you are rounding to is 4 or lower.

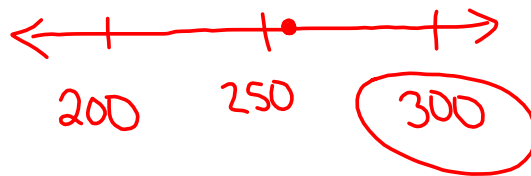
Do Now: **Communicate.**

What are the rules regarding rounding?

What are the similarities and differences between rounding to a whole number and rounding to a decimal digit?

$\underline{257.}$
↪

300



$\underline{12.368}$
↪

~~12.400~~

12.4

Decimal Digit Rounding

The answer ends in the place you were asked to round to.

Name _____ **Extra Practice**
(Lessons 3-1 and 3-2)

Fractions and Decimals, Place Value and Metric Prefixes

Write each decimal as a fraction or mixed numeral.

1. 82.4 $82\frac{4}{10}$ 2. 0.005 $\frac{5}{1000}$ 3. 3.9 4. 0.025
5. 25.002 6. 923.3 7. 6.50 8. 0.0125

Write each of the following as a decimal and as a fraction.

9. eight thousandths 0.008 $\frac{8}{1000}$ $\frac{125}{10,000}$
10. three and two hundredths
11. eighty-five thousandths
12. forty-five and nine tenths 45.9 $45\frac{9}{10}$
13. six ten-thousandths
14. seven hundred and three thousandths

Write each number in expanded notation.

15. 0.013 $(0 \times 1) + (0 \times \frac{1}{10}) + (1 \times \frac{1}{100}) + (3 \times \frac{1}{1000})$
16. 62.175
17. 6.002
18. 307.6005

Write each of the following as a decimal.

19. $(5 \cdot 1000) + (4 \cdot 100) + (0 \cdot 10) + (7 \cdot 1)$
20. $(6 \cdot 100) + (0 \cdot 10) + (5 \cdot 1) + (8 \cdot \frac{1}{10})$
21. $(3 \cdot 10) + (8 \cdot 1) + (0 \cdot \frac{1}{10}) + (6 \cdot \frac{1}{100})$
22. $(5 \cdot 10) + (9 \cdot 1) + (0 \cdot \frac{1}{10}) + (0 \cdot \frac{1}{100}) + (9 \cdot \frac{1}{1000})$ 59.009
23. $(2 \cdot 100) + (0 \cdot 10) + (8 \cdot 1) + (5 \cdot \frac{1}{10})$

~~Complete~~

- ~~24. _____ hundredths = 1 one 25. 1 dekameter = _____ centimeters
26. _____ decimeters = 1 kilometer 27. _____ grams = 1 hectogram
28. 1 liter = _____ milliliters 29. _____ millimeters = 1 centimeter~~

Name _____

Extra Practice
(Lessons 3-3 and 3-4)

Rounding Decimals, Comparing Decimals

Round each of the following to the nearest whole number.

ones place

- | | | |
|-------------|------------|--------------|
| 1. 615.813 | 2. 213.904 | 3. 86.399 |
| 4. 6157.501 | 5. 753.18 | 6. 32156.909 |

Round each of the following to the nearest tenth.

- | | | |
|-------------|--------------------------|---------------|
| 7. 67.314 | 8. 86.704 | 9. 853.76 |
| 10. 32.8765 | * 11. 91.998 <i>92.0</i> | 12. 54.876523 |

Round each of the following to the nearest hundredth.

- | | | |
|--------------|--------------|---------------|
| 13. 54.317 | 14. 6.1958 | 15. 113.6572 |
| 16. 12.91199 | 17. 81.91745 | 18. 64.017562 |

Round each of the following to the nearest thousandth.

- | | | |
|--------------|-------------------------------|---------------|
| 19. 235.8587 | * 20. 810.8001 <i>810.800</i> | 21. 971.09090 |
| 22. 2.199999 | 23. 7089.34567 | 24. 0.000398 |

Round each of the following to the nearest cent.

hundredths place

- | | | |
|--------------|---------------|----------------|
| 25. \$5.875 | 26. \$6.992 | 27. \$54.679 |
| 28. \$39.625 | 29. \$154.999 | 30. \$365.8009 |

Fill in each blank with $>$, $<$, or $=$ to make a true sentence.

- | | |
|----------------------------|------------------------------|
| 31. 0.124 ____ 0.123 | 32. 5.79 ____ 57.9 |
| 33. 0.09 ____ 0.0899 | 34. $1\frac{5}{10}$ ____ 1.5 |
| 35. 0.005 ____ 0.05000 | 36. 973.5 ____ 983.4 |
| 37. 513.644 ____ 513.63999 | 38. 854.9176 ____ 853.9176 |
| 39. 9.654 ____ 9.5643 | 40. 19.817659 ____ 19.81769 |