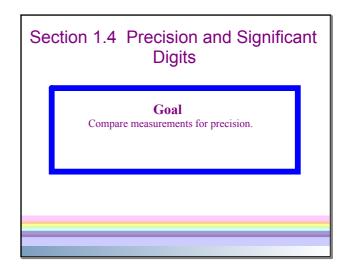
Warm-up: Translate the verbal phrase into an inequality or equation.

1. Five minus the quantity of a number x plus 2 is at most 16.

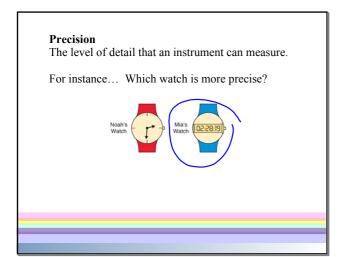
$$5 - (x+2) \le 16$$

2. Evaluate when x = 3

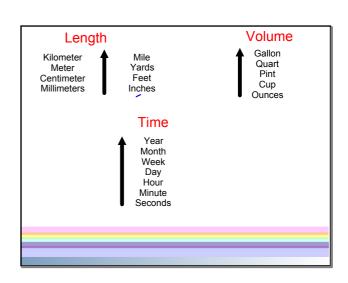
Sep 10-10:08 PM



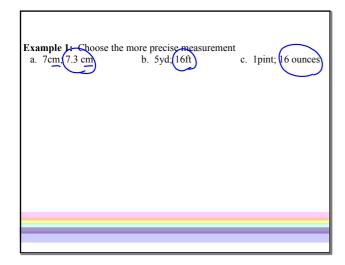
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Checkpoint: Choose the more precise measurement.
1 (14mm) 2cm
2. 2.5hr; 90 minutes

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Significant Digits

The digits in a measurement that carries meaning contributing to the precision of the measurement.

Determining Significant Digits

Rule	Example	Significant Digits	Number of Significant Digits
All nonzero digits	281.39	281.39	3
Zeros that are to the right of both the last nonzero digit and the decimal point	Ø.ØØ7 <u>0</u>	0.00 <u>70</u>	2
Zeros between significant digits	500.7	500.7	4
Zeros at the end of a whole number	220	<u>22</u> 0	2

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Example 2: Determine the number of significant digits in each measurement. b. **0**.8500 km

a. 290.01g 5

c. 4000 mi

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Checkpoint: Determine the number of significant digits in each measurement.

3. 800.20 ft 9

4. **9.00**5 cm

5. 36,900 mi

Significant Digits in Calculations

When you perform calculations involving measurements, the number of significant digits that you write in your result depends on the number of significant digits in the given measurements.

Operations	Rule	Example
Addition and Subtraction	Round the sum or difference to the same place as the last significant digit of the least precise measurement	$3.\underline{24} \leftarrow \text{hundredths}$ $+7.3 \leftarrow \text{tenths}$ $10.5 \leftarrow \text{tenths}$
Multiplication and Division	The product or quotient must have the same number of significant digits as the least precise measurement	4 ← 1 sig digit × 31 ← 2 sig digits 1240 ← exact answer 1000 ← 1 sig digit

Adding/Subtracting: LEAST number of decimal places Multiplying/Dividing: LEAST number of significant digits

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Example 3: Perform the indicated operation. Write the answer with the correct number of significant digits.

a. 45.1 cm + 19.45 cm

b. 6.4 ft x 2.15 ft

13,A/6 ft

6. 27.<u>23</u> m – 12.<u>7</u> m

Checkpoint: Perform the indicated operation. Write the answer with the correct number of significant digits.

7. 45.16 yd² ÷ 4.25 yd

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