**Guided Reading: Significant Figures** Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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1. What is a **significant figure**?
2. **Key Idea**: Why must measurement always be reported to the correct number of significant figures?
3. Instruments \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that can be obtained from their use and thus in the precision of measurements.

**Write the rules for determining significant figures and give one example of each rule.**

**Write the number of significant figures in each measurement below then write the rule you used.**

Measurement Number of sig.figs. Rule (write the rule for the first 10 problems)

1. 123 m

1. 34,506 mm
2. 4.6000 x 104 m
3. 34 students
4. 0.04523 m
5. 34,000 m
6. 0.05730 m
7. 8765 m
8. 0.00073 m
9. 40.007 m
10. 143 grams
11. 0.074 m
12. 6.570 x 10-2 g
13. 1.072 meters
14. 76.00 meters
15. 400 mm
16. 6.00 x 104 m
17. 28 students in the class
18. 0.654 m
19. 0.00034 m
20. 8000 m
21. 340,480 g
22. 341,480 meters
23. 4.098 x 10-4 g