

MATH HANDBOOK TRANSPARENCY MASTER



Significant Figures

Use with Appendix B,
Significant Figures

Rules for Significant Figures

- 1** All nonzero figures are significant.

721 mm *3 significant figures*

- 2** When a zero falls between nonzero digits, that zero is significant.

106 K *3 significant figures*

- 3** When a zero falls after the decimal point and after a significant figure, that zero is significant.

1.50 L *3 significant figures*

- 4** When a zero is used merely to indicate the position of the decimal, that zero is *not* significant.

1 210 m *3 significant figures*
0.053 m *2 significant figures*

- 5** All counting numbers and exact numbers are treated as if they have an infinite number of significant figures.

10 pairs *infinite number of significant figures*

MATH HANDBOOK TRANSPARENCY WORKSHEET

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Significant Figures

Use with Appendix B,
Significant Figures

1. For each of the measurements in the table below, determine if the underlined number is significant or not significant. Place a check mark in the appropriate box and in the box under the rule that you used to make your determination.

Measurement	Significant	Not Significant	Rule				
			1	2	3	4	5
a. 30 <u>3</u> 8 m							
b. 1.5 <u>6</u> 1 L							
c. 0. <u>0</u> 74 mm							
d. 50 <u>5</u> 0 s							
e. 3. <u>0</u> 07 km							
f. 6. <u>1</u> 0°C							
g. 82 <u>1</u> .0 g							
h. <u>0</u> .560 g							

2. Determine the number of significant figures in each of the following measurements.

- | | |
|-------------------------------|--------------------------------------|
| a. 56 m _____ | n. 0.0021 m _____ |
| b. 1104 mL _____ | o. 30 015 g _____ |
| c. 15 pairs _____ | p. 90 km _____ |
| d. 0.20 mol _____ | q. 12.0 cm _____ |
| e. 105 000 mm _____ | r. 0.0305 kPa _____ |
| f. 6.02 L _____ | s. 50 gross _____ |
| g. 0.176 kPa _____ | t. 83.90 m/s ² _____ |
| h. 819 000.0 g _____ | u. 0.100 50 cg _____ |
| i. 4.030 m ³ _____ | v. 0.0510 kg _____ |
| j. 0.005 42 s _____ | w. 6.12 × 10 ⁵ mm _____ |
| k. 49 000 km _____ | x. 4.01 × 10 ² s _____ |
| l. 7.81 kg _____ | y. 60 000 × 10 ³ g _____ |
| m. 7.01 m/s _____ | z. 1.000 × 10 ² kPa _____ |