

Name Key Period _____

Significant Figures Worksheet

1. How many significant figures are there in each of the following measurements?

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|------------------------------|-----------------------------------|--------------------------------------|
| a. 3.58 g 3 | b. 14.809 cm 5 | c. 107.334 km 6 |
| d. 0.0004898 mm 4 | e. 3000. cm 4 | f. 804.58 kg 5 |
| g. 0.007832 cg 4 | h. 130,004.5 mm 7 | i. 250.00 km 5 |
| j. 14.380 s 5 | k. 307g 3 | l. 1.40082 cm 6 |
| m. 0.00058900g 5 | n. 4500 km 2 | o. 180.00 s 5 |
| p. 0.00300900870 mm 9 | q. 3.50×10^3 cm 3 | r. 1.604×10^{-4} g 4 |

2. Express the answer to each of the following calculations with the correct number of significant figures.

- | | |
|---|--|
| a. $8.4 \text{ cm} \times 3.58 \text{ cm} = 30. \text{ cm}^2$ | b. $1.075 \text{ m} \times 2.0 \text{ m} = 2.2 \text{ m}^2$ |
| c. $3.0899 \text{ mm} \times 22.4 \text{ mm} = 69.2 \text{ mm}^2$ | d. $0.00457 \text{ cm} \times 0.18 \text{ cm} = 0.00082 \text{ cm}^2$ or $8.2 \times 10^{-4} \text{ cm}^2$ |
| e. $10.00 \text{ m} \times 84.767 \text{ m} = 847.7 \text{ m}^2$ | f. $35.068 \text{ km}^3 \div 5.7 \text{ km} = 6.2 \text{ km}^2$ |
| g. $85.0869 \text{ m}^2 \div 9.0049 \text{ m} = 9.4490 \text{ m}$ | h. $0.00826 \text{ cm}^2 \div 0.00033 \text{ cm} = 25 \text{ cm}$ |
| i. $0.005600 \text{ mm}^2 \div 0.200 = 0.0280 \text{ mm}^2$ | j. $3.4500 \text{ cm}^2 \div 450 \text{ cm} = 0.0077 \text{ cm}$ |
| k. $3.0 \text{ cm} \times 4.000 \text{ cm} = 12 \text{ cm}^2$ | l. $2.005 \text{ cm} \times 5.0 \text{ cm} = 10. \text{ cm}^2$ |
| m. $400 \text{ m} \times 87,488 \text{ m} = 3 \times 10^7 \text{ m}^2$ | n. $2.3 \times 10^{-6} \text{ m} \times 1.45 \times 10^{-2} \text{ m} = 3.3 \times 10^{-8} \text{ m}^2$ |
| o. $8.70 \times 10^{-2} \text{ mm} \times 4.0 \text{ mm} = 0.35 \text{ mm}^2$ | p. $0.0045 \text{ mm}^2 \div 0.90 \text{ mm} = 0.0050 \text{ mm}^2$ |
| q. $120 \text{ km}^2 \div 8.56 \text{ km} = 14 \text{ km}$ | r. $0.7600 \text{ mm}^3 \div 1.50 \text{ mm} = 0.507 \text{ mm}^2$ |
| s. $4.80 \times 10^5 \text{ m}^2 \div 8.5 \times 10^3 \text{ m} = 56 \text{ m}$ | t. $6.30 \times 10^{-2} \text{ m}^3 \div 8.04 \text{ m} = 7.84 \times 10^{-3} \text{ m}^2$ |

3. Express the answer to each of the following calculations with the correct number of significant figures.

- | | |
|--|---|
| a. $82.5 \text{ cm} + 13.56 \text{ cm} = 96.1 \text{ cm}$ | b. $16.8892 \text{ km} + 3.5 \text{ km} = 20.4 \text{ km}$ |
| c. $45.456 \text{ g} + 3.56 \text{ g} = 49.02 \text{ g}$ | d. $106.22 \text{ mm} + 80.0 \text{ mm} = 186.2 \text{ mm}$ |
| e. $30.44 \text{ kg} + 3.9422 \text{ kg} = 34.38 \text{ kg}$ | f. $13.80 \text{ cm} - 6.0741 \text{ cm} = 7.73 \text{ cm}$ |
| g. $8.472 \text{ cg} - 1.440 \text{ cg} = 7.032 \text{ cg}$ | h. $30. \text{ s} - 1.442 \text{ s} = 29 \text{ s}$ |
| i. $54.00 \text{ g} - 30.2020 \text{ g} = 23.80 \text{ g}$ | j. $1.45050 \text{ kg} - 0.00667 \text{ kg} = 1.44383 \text{ kg}$ |

4. Express the answer to each of the following calculations with the correct number of significant figures.

- a. $\frac{15.554 \text{ cm} \times 0.000312 \text{ cm}}{(1.5 \text{ cm} + 3.62 \text{ cm})} = 9.5 \times 10^{-4} \text{ cm}$ or 0.00095 cm
- b. $\frac{(2.9 \times 10^3 \text{ mm}^2 \times 1.00 \times 10^5 \text{ mm})}{(1.22 \times 10^{-2} \text{ mm} \times 5.7778 \times 10^{-3} \text{ mm})} = 4.1 \times 10^{12} \text{ mm}$
- c. $\frac{(8.00006 \text{ m}^2 - 2 \text{ m}^2)}{2.4 \times 10^{-1} \text{ m}} = 25 \text{ m} = 30 \text{ m}$ or $3 \times 10^1 \text{ m}$

Please Excuse My Dear Aunt Sally!
 Parentheses $\rightarrow$ Exponents $\rightarrow$ M & D $\rightarrow$ Add & Sub $\rightarrow$ Work from L to R

