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| **Skill 5.01 Exercise 1** |
| Which measuring device is most accurate? |
| For each data set, identify the measurement taken from the most accurate measuring device. |
| (a) 1.0 g, 1.00 g, 1.000 g  (b) 12 cm, 123 cm, 1234 cm  (c) 1 g, 0.1 g, 0.01 g, 0.001 g |
| Two students did a lab to determine the density of water and obtained the following results. Which data is most precise?  A: 1.001, 1.100, 0.995, 0.999, 1.000  B: 1.000, 0.999, 1.001, 0.998, 1.005 |

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| **Skill 5.02 Exercise 1** |
| A student did an experiment to determine the density of iron and obtained the following value 7.92 g/mL. The accepted value is 7.87 g/mL. What is the percent error? |
| A student did an experiment to determine the density of tin and obtained the following value 7.18 g/mL. The accepted value is 7.31 g/mL. What is the percent error? |
| Which value above is most accurate? |

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| **Skill 5.03 Exercise 1** |
| Megan measured the mass of 5 skittles and obtained the following results. What is the mean (average)?  1.001 g, 1.010 g, 0.995 g, 0.999 g, 1.000 g |

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| **Skill 5.04 Exercise 1** |
| The exam scores on a chemistry class are as follows.  What is the average for each class?  What is the standard deviation for each class?   |  |  | | --- | --- | | Period 5 | Period 7 | | 95 | 88 | | 87 | 89 | | 66 | 90 | | 100 | 77 | | 78 | 95 | | 98 | 80 | | 77 | 79 | | 85 | 78 | | 78 | 90 | | 82 | 88 | | 88 | 82 | | 99 | 96 | | 90 | 78 | | 68 | 77 | | 78 | 90 | | 90 | 98 | | 88 | 90 | | 67 | 100 | | 88 | 98 | | 65 | 88 | |

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| **Skill 5.05 Exercise 1** |
| Calculate the precision of the exam scores for each class. The exam scores for which class are most precise? |