Name: _____   Date: _____

Practice: Focus on Reasoning and Proving

1. There are 136 coins in the cash box. There are an equal number of loonies and quarters. There are half as many dimes as quarters and one third as many nickels. How much money is in the cash box?

2. Suppose you want to determine which power of -3 is closest to -500.
   a) What information does the negative sign in front of 500 give you?
   b) Find the power of -3 that is closest to -500. Describe your thinking.

3. Provide a counterexample to prove each statement is false.
   a) The sum of a positive integer and a negative integer is always negative.
   b) All triangles have all angles less than 90°.
   c) The product of two fractions is always a fraction.

4. Copy each expression. Replace each $\square$ with one of these symbols, $+, -, \times, \div, =$, to make true statements.
   a) $5\ \square\ 2\ \square\ 8\ \square\ 4\ \square\ 12$
   b) $33\ \square\ 81\ \square\ 3\ \square\ 42\ \square\ 7$
   c) $2\frac{1}{4}\ \square\ \frac{1}{4}\ \square\ \frac{1}{3}\ \square\ 6$