**Exercise 1:**
In the year 2010, the US population was (about) 309 million people.
(a) About 12.6% of all US citizens were African American. How many is that?
(b) About 16.4% of all US citizens were Hispanic or Latino. How many is that?
(c) About 0.9% of all US citizens were Native American or Native Alaskan. How many is that?

**Exercise 2:**
Currently (2014), the population of the Sub-Saharan country Chad is 12.83 million people.
For the last 5 years (since 2009), the population has been growing by 3 percent each year.
(a) If the trend continues, how many people will live in Chad 1 year from now?
(b) How many people lived in Chad 1 year ago? (Careful: Whatever answer you find, check if adding 3% will give you the 12.83 million. If it does not, then your answer is wrong!)
(c) By what (total) percentage did the population of Chad grow during the 5 years 2009 - 2014?
(d) If the trend continues, by what (total) percentage will the population of Chad grow over the next 5 years?
(e) If this trend continues for the next 5 years, how many people will live in Chad 5 years from now?
(f) If this growth pattern continues, what would be the Population of Chad in 2050?

**Exercise 3:**
Here is the GDP of China in 4-year steps from 1984 - 2012 in billion $. The GDP is a measurement of the "economy". The "economy" in the western world is considered to be "healthy", if it grows by 3% each year. Use the data and what I said above to determine if China's economy was "healthy" for each of the 4-year time periods.

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<tbody>
<tr>
<td>GDP (billion $)</td>
<td>500</td>
<td>990</td>
<td>1482</td>
<td>2193</td>
<td>3508</td>
<td>4628</td>
<td>7451</td>
<td>10995</td>
<td>15200</td>
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Explain in a few words (or by showing what you did carefully for one of the 4-year periods). What are you looking for in the numbers, and how did you check if it was there?

**Exercise 4:**
We saw in class today that (and why) "adding 5%" of an amount to that amount can be accomplished in one step: *Multiply the amount by 1.05*. Go back to the reasons for why this is true, and figure out if "subtracting 5%" of an amount from that amount can be accomplished by a single multiplication. If yes: What would you have to multiply by? If no, why not?

**Exercise 5:**
The value of a property in Anderson township gained 4% in 2008, gained 5% in 2009, lost 7% in 2010, and lost 10% of its value in 2011. During this 4 year period, the value of the property went down...
(a) By what percentage?
(b) If in 2012 the value of the property increased so that the value was the same as in 2008, by what percentage did the value grow in 2012? (you need to be careful here! see part (c) first.)
(c) If the value of an investment or a property drops by 10%, and then grows by 10%, will the investment be back at its original value? Why / Why not? You may want to check this for some particular value of a property, say, $100,000.