1. Show why dividing fractions is the same thing as multiplying by the reciprocal of the denominator.

2. Explain what we are really doing when we do the long multiplication process we learned from school. E.g. Why do we add at the end, why add zeros when we move places, etc.

3. Show why $b^m \cdot b^n = b^{m+n}$

4. Prove that $3x^2 = 3x^2$ for all values of x. Seems trivial but is a good exercise.

5. Prove that the 3:4:5 Pythagorean ratio holds when we scale the ratio by any whole number n.