Read each problem **very carefully** before starting to solve it. Each problem is worth 5 points. It is necessary to show **all** your work. Correct answers without explanations are worth 0 points. GOOD LUCK!!

1. Guido and Paola went hiking in the Apennines. Guido averages 4 mph and Paola 3 mph. They started out together in the morning, but Guido reached the campground 2 hours and 30 minutes ahead of Paola. How many miles did they (each) hike that day?

2. Use the product and quotient rules to simplify the following radicals. Please, assume that all variables represent positive quantities.

    (a)

    $$\sqrt[4]{48a^4b^9} =$$

    (b)

    $$\sqrt[3]{\frac{x^4y^6}{z^9}} =$$