

Name: SOLUTIONS

Math 1260 Quiz #5 - May 24, 2006

1. Find the simple interest for \$25,000 at 7% for 9 months.

$$(25000)(.07) (9/12) = \$1312.50$$

2. Find the amount that should be invested now to accumulate \$7500 at 12.3% compounded quarterly for 9 years. (quarterly=4 times/year).

$$7500 = P \left(1 + \frac{.123}{4} \right)^{4 \cdot 9}$$

$$7500 = P(2.975)$$

$$P = 2520.81$$

3. Find the effective rate corresponding to an annual rate of 5% compounded monthly.

$$r_e = \left(1 + \frac{.05}{12} \right)^{12} - 1 = 5.12\%$$

4. Write this expression as a single fraction in lowest terms, show your work:

$$\frac{1/3 + 1/4}{(2 + \frac{2}{3}) \div (4/5)}$$

$$\begin{aligned} &= \frac{\frac{4}{12} + \frac{3}{12}}{\frac{8}{3} \div \frac{4}{5}} = \frac{\frac{7}{12}}{\frac{8}{3} \cdot \frac{5}{4}} = \frac{\frac{7}{12}}{\frac{40}{12}} = \frac{7}{12} \cdot \frac{12}{40} = \frac{7}{40} \end{aligned}$$