Practice Quiz: Retirement Compound Interest Scenario **Name:** Key

Use the following information for 1–4, lots of people work for 30 years before they retire. Saving for your retirement is crucial. Luckily, you have $10,000 to put into an account that earns interest. Use the formula: $B = p\bullet(1 + r)^t$ where B is the Balance, p is the principal (starting amount), r is the interest rate, and t is the number of years.

5 pts each 20 pts

1. If you put your $10,000 into an account that earns 8% compound interest at the beginning of your career, how much money will be in your account at the end of your career? Show all of your work for full credit. Round your answer to the nearest penny. $B = p\bullet(1 + r)^t$

$B = \$10,000 \cdot 1.08^{30}$

#1 ANSWER: $100,626.57

2. If you put your $10,000 into an account that earns 15% compound interest for the last 10 years of your career, how much money will be in your account at the end of your career? Show all of your work for full credit. Round your answer to the nearest penny. $B = p\bullet(1 + r)^t$

$B = \$10,000 \cdot 1.15^{10}$

#2 ANSWER: $40,455.58

3. Which problem, #1 or #2, would be the best if you had $5,000 for both? Show your work to help decide with your answer. $B = p\bullet(1 + r)^t$

$B = \$5,000 \cdot 1.08^{30}$

$B = \$50,313.28$

$B = \$5,000 \cdot 1.15^{10}$

$B = \$20,227.79$

CIRCLE ONE

#3 ANSWER: (#1) **OR** #2

4. Which problem, #1 or #2, would be the best if you had the same amount for #1 but had $20,000 for #2? Show your work to help decide with our answer. $B = p\bullet(1 + r)^t$

$B = \$100,626.57$

$B = \$20,000 \cdot 1.15^{10}$

$B = \$80,911.15$

CIRCLE ONE

#4 ANSWER: (#1) **OR** #2