

Review for Test

Solve each of the following using simple or compound interest:

1. Jim wants to invest \$8000.00. His bank offers an investment option that earns **simple interest** at a rate of 3.25% per year. How much interest would Jim earn on his investment after 6 years?
2. Troy wants to invest \$4500.00. His bank offers an investment option that earns **interest compounded** quarterly at a rate of 3.2% per year for 7 years.
3. Ava's bank offers a **simple interest** rate of 7% per annum. How much interest would Ava earn on her investment of \$6500.00 after 3 months?
4. Ryan wants to invest \$650.00. His bank offers an investment option that earns **interest compounded** monthly, at a rate of 6.3% per year for 5 years.
5. Ben wants to invest \$2950.00. His bank offers an investment option that earns **interest compounded biweekly** at a rate of 3.9% per year for 7 years.

Using the simple interest equation calculate the unknown (I = Prt)

6. The interest earned on a deposit is \$89.00 with an interest rate of 4.2% per annum. If the money was invested for 4 years, **what is the principal?**
7. The interest earned on a deposit is \$210.00 with an interest rate of 6.5% per annum. If the money was invested for 6 years, **what is the principal?**

4. Ryan wants to invest \$650.00. His bank offers an investment option that earns interest **compounded monthly** at a rate of 6.3% per year for 5 years.

5. Ben wants to invest \$2950.00. His bank offers an investment option that earns interest **compounded biweekly** at a rate of 3.9% per year for 7 years.

Using the simple interest equation calculate the unknown $(I = Prt)$

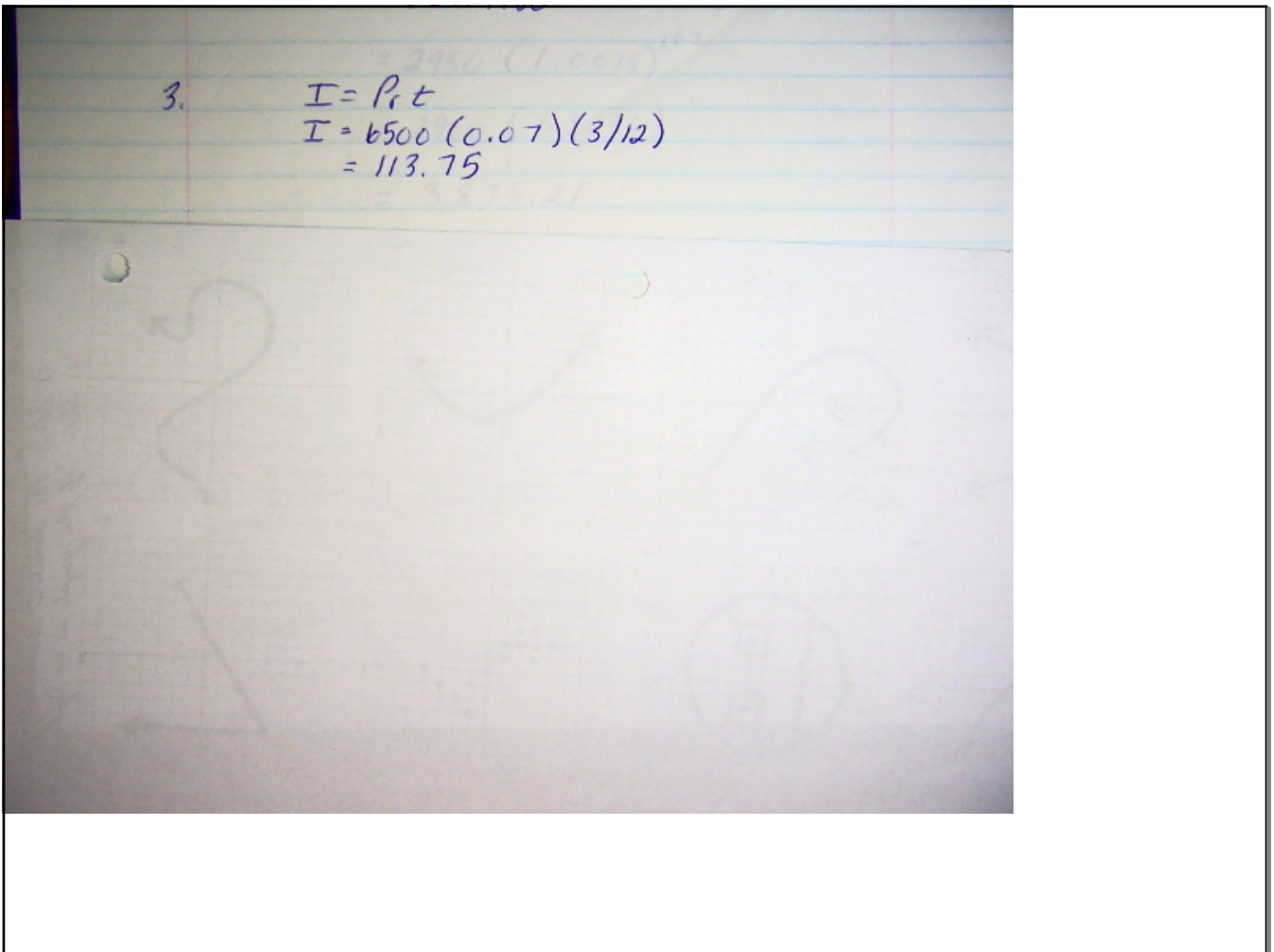
6. The interest earned on a deposit is \$89.00 with an interest rate of 4.2% per annum. If the money was invested for 4 years, **what is the principal?**
7. The interest earned on a deposit is \$210.00 with an interest rate of 6.5% per annum. If the money was invested for 6 years, **what is the principal?**
8. The interest earned on a deposit of \$5000.00 is \$78.00. If the money was invested for 7 years, **what is the interest rate?**
9. The interest earned on a deposit of \$6250.00 is \$92.00. If the money was invested for 4 years, **what is the interest rate?**
10. The interest earned on a deposit of \$4800.00 is \$50.00 with an interest rate of 3.95%. **How many years** was the money invested?

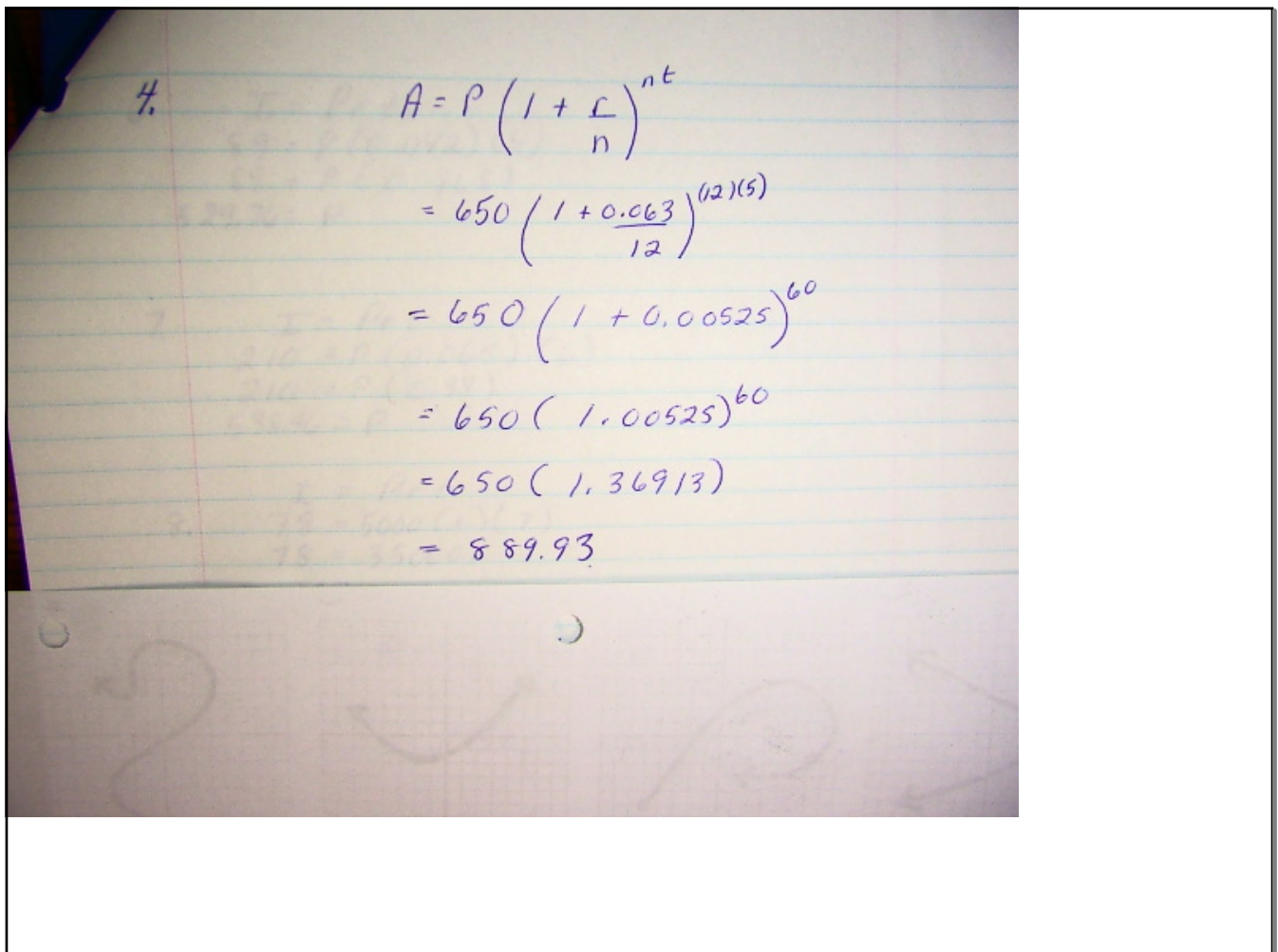
1.

$$I = Prt$$
$$I = (8000)(0.0325)(6)$$
$$I = 1560$$

2.

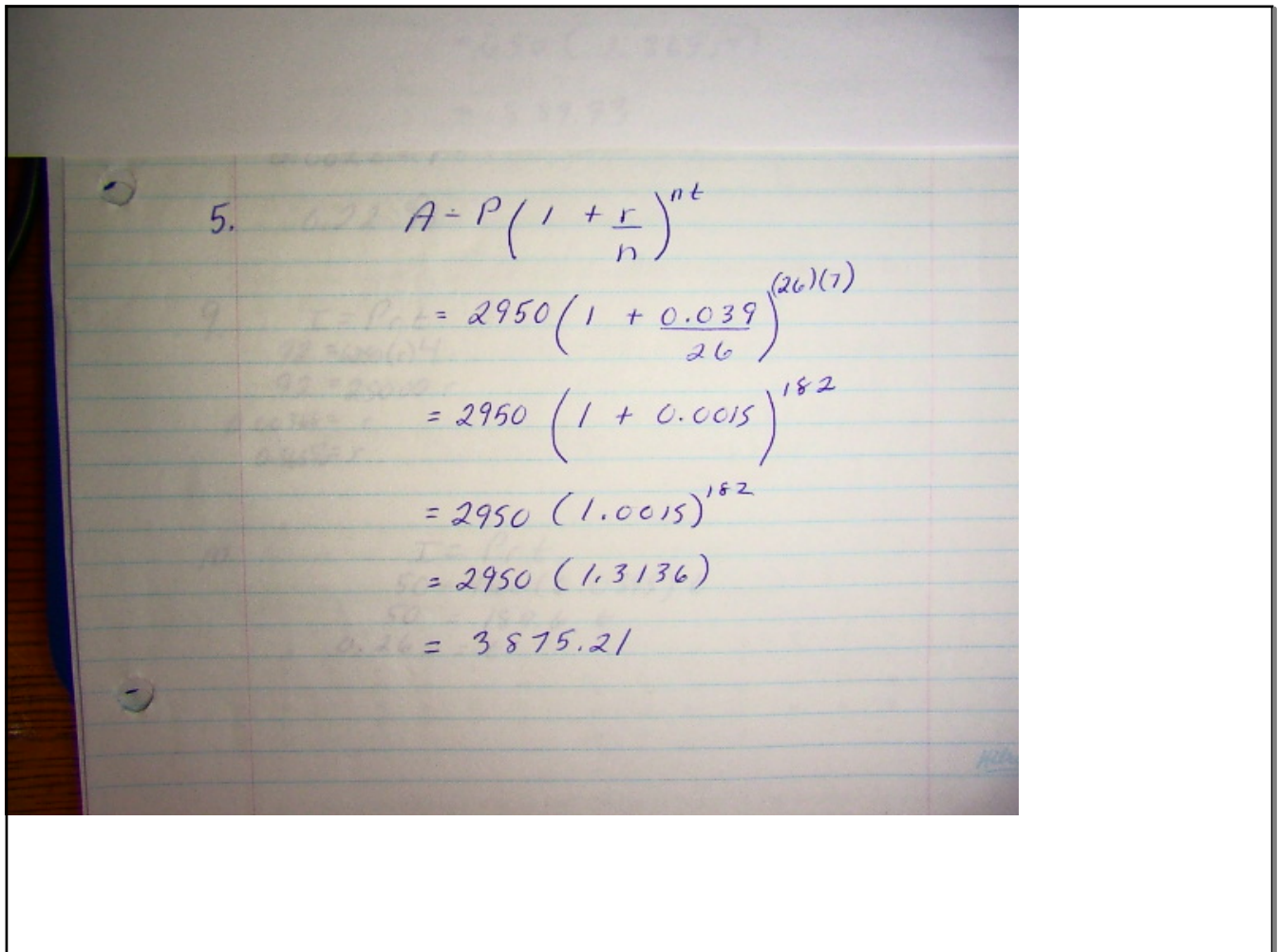
$$A = P \left(1 + \frac{r}{n} \right)^{nt}$$
$$A = 4500 \left(1 + \frac{0.032}{4} \right)^{(4)(7)}$$
$$A = 4500 \left(1 + \frac{0.032}{4} \right)^{28}$$
$$A = 4500 (1 + 0.008)^{28}$$
$$A = 4500 (1.008)^{28}$$
$$A = 4500 (1.24995)$$
$$A = 5624.80$$





4.

$$A = P \left(1 + \frac{r}{n} \right)^{nt}$$
$$= 650 \left(1 + \frac{0.063}{12} \right)^{(12)(5)}$$
$$= 650 \left(1 + 0.00525 \right)^{60}$$
$$= 650 (1.00525)^{60}$$
$$= 650 (1.36913)$$
$$= 889.93$$



5. $A = P \left(1 + \frac{r}{n} \right)^{nt}$

$$A = P \left(1 + \frac{r}{n} \right)^{(26)(7)}$$
$$= 2950 \left(1 + \frac{0.039}{26} \right)^{182}$$
$$= 2950 (1.0015)^{182}$$
$$= 2950 (1.3136)$$
$$= 3875.21$$

$$\begin{aligned} 6. \quad I &= Prt \\ 89 &= P(0.042)(4) \\ 89 &= P(0.168) \\ 529.76 &= P \end{aligned}$$

$$\begin{aligned} 7. \quad I &= Prt \\ 210 &= P(0.065)(6) \\ 210 &= P(0.39) \\ 538.46 &= P \end{aligned}$$

$$\begin{aligned} 8. \quad I &= Prt \\ 78 &= 5000(r)(7) \\ 78 &= 35000r \\ 0.0022 &= r \\ 0.22\% \end{aligned}$$

9.

$$I = Prt$$
$$92 = 6250(r)4$$
$$92 = 25000r$$
$$0.00368 = r$$
$$0.368\% = r$$

10.

$$I = Prt$$
$$50 = 4800(0.0395)t$$
$$50 = 189.6t$$
$$0.26 = t$$