Directions: Please answer the following questions and make sure your answer are legible. If you don’t show work and/or I can’t follow it, I won’t give partial credit. You may use a calculator. Good Luck.

This quiz is take home, so it is open book/note. However, you may not discuss your answers with anyone except Jackie Kaminski. (You may still discuss HW questions with anyone on Earth). This quiz is due at 4:00pm on Wednesday (not whenever you walk into class on wednesday, or the next time you attend class). It may be turned in early under my office door (255 Hawthorn).

1. I ______________________________ certify that I have not discussed my work on this quiz with anyone (other than Jackie Kaminski). This includes in-person communication, electronic communication and all other forms of communication. I understand that violating this policy is considered Academic Dishonesty, and will be dealt with accordingly.

signature ______________________________ date ______________________________

2. (8 points) Chris will receive a paycheck of $2120.50 in 16 days. A payday lender offers to give Chris the cash today for a fee of $11% of the amount of the check plus an additional $5 service fee. (In exchange, Chris will sign over the entire $2120.50 check to the lender).

(a) Find the total fees Chris will be charged.

(b) How much will Chris receive today from the payday lender?

(c) Find the equivalent simple discount rate for this loan.

(d) Find the equivalent simple interest rate for this loan.
3. (7 points) Jackie Industries had a big order that will pay them $15,000 in 13 weeks. However, they have a cash-flow problem and need money now (they need to repair broken equipment). Their accountant found them a discount loan with a simple discount rate of 10.41%. (Assume the maturity value of the discount loan will be the whole $15,000.)

(a) What is the discount on this discount loan?

(b) What is the equivalent simple interest rate?

(c) Suppose the accountant also found them a (regular) loan with a simple interest rate of 10.55%. Which loan should Jackie Industries choose? Make sure to explain your reasoning.

\[
\text{a) } D = M d \frac{T}{52} \\
\text{ } \\
D = ? \\
M = 15,000 \\
d = .1041 \\
T = \frac{13}{52} \\
D = 15,000 \times .1041 \times \frac{13}{52} \\
D = 390.375 \\
P = 390.38 \\
\text{b) } I = PRT \\
I = 390.38 \\
P = 14,609.62 \\
R = ? \\
T = \frac{13}{52} \\
I = 390.38 = 14,609.62 \times R \times \frac{13}{52} \\
\frac{390.38}{14,609.62} \times \frac{13}{52} = R \\
0.010689999827 = R \\
10.69\% \text{ is equiv simp interest rate} \\
\text{c) Since Jackie Ind is the borrower, they want the smaller simp interest rate (10.69\% vs. 10.55\%). They should choose the regular loan (optimal) with smaller simp interest rate.} \]