

MTH 351
Half Exam 1
Fall 2020

50 points possible.

0. (2 pts.) Two free points.

1. (8 pts.) Suppose that $a(t) = 0.20t^2 + 1$. The only investment made is 400 at time 3. Find the accumulated value of the investment at time 10.

2. (8 pts.) Suppose $A(6) = 3000$ and $i = 0.06$.

What is $A(8)$ assuming simple interest?

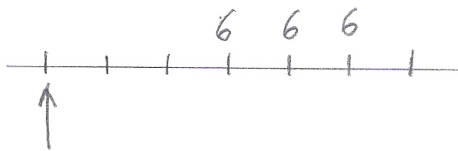
3. (8 pts.) You are given that $i^{(4)} = 0.10$. Calculate δ .

4. (8 pts.) A collection agency pays a doctor 6000 for invoices that the doctor has not been able to collect on. After three years, the collection agency has collected 8000 on the invoices. What nominal rate of discount compounded quarterly did the collection agency receive on this transaction?

5. (8 pts.) If $a(t) = 1 + 0.02(t^2 + 3t)$, calculate δ_4 .

6. (8 pts.) Give the expression for the value of the cash flow at the indicated date.

(a)



(b)

