Name: **Date:**

Problem-Based Task: Future Finances

Coaching

a. How can you determine whether earning $3,495.25 a month for the remainder of Cole's time on the farm is linear or exponential?

b. Write a function to model earning $3,495.25 a month for the length of Cole's time on the farm.

c. How can you determine whether earning $0.01 for the first month and then earning double the previous month's pay for each month afterward is linear or exponential?

d. Write a function to model earning $0.01 for the first month and then earning double the previous month's pay each month for the length of Cole's time on the farm.

e. Graph both functions on the same coordinate plane.

f. When is it a better option to choose $0.01 for the first month and then double the previous month's pay for every month after?

g. Is there a point on the graph where choosing either option results in the same payment?

h. If Cole finishes school in 21 months and collects his payment then, which is the better option?

i. If Cole finishes school in 27 months and collects his payment then, which is the better option?

j. Which is the better option for Cole?