8-F Modeling with a Linear Function

Task

Which of the following could be modeled by $y = 2x + 5$? Answer YES or NO for each one.

a. There are initially 5 rabbits on the farm. Each month thereafter the number of rabbits is 2 times the number in the month before. How many rabbits are there after x months?

YES NO

b. Joaquin earns $2.00 for each magazine sale. Each time he sells a magazine he also gets a five-dollar tip. How much money will he earn after selling x magazines?

YES NO

c. Sandy charges $2.00 an hour for babysitting. Parents are charged $5.00 if they arrive home later than scheduled. Assuming the parents arrived late, how much money does she earn for x hours?

YES NO

d. I have a sequence of integers. The first term of the sequence is 7 and the difference between any consecutive terms is always equal to 2.

YES NO

e. Sneak Preview is a members-only video rental store. There is a $2.00 initiation fee and a $5.00 per video rental fee. How much would John owe on his first visit if he

becomes a member and rents x videos?

YES NO

f. Andy is saving money for a new CD player. He began saving with a $5.00 gift and will continue to save $2.00 each week. How much money will he have saved at the end of x weeks?

YES NO