COMPLETE THE EXPECTED VALUE PROBLEMS BELOW. CLICK ON THE BUTTON ABOVE OR SCAN THE QR CODE ABOVE TO WATCH A VIDEO THAT EXPLAINS THE SOLUTIONS TO THE PROBLEMS.

EXPECTED VALUE REVIEW

1) The number of suits sold per day at a retail store is shown in the table, with the corresponding probabilities.

Number of suits sold X	19	20	21	22	23
Probability $P(X)$	0.2	0.2	0.3	0.2	0.1

a) What is the expected value of suits that will be sold in a store on a given day?

b) How many suits should the manager order to ensure that the store has enough suits for the next 5 days?

2) A bank vice president feels that each savings account customer has, on average, three credit cards. The following distribution represents the number of credit cards people own.

Number of cards X	0	1	2	3	4
Probability $P(X)$	0.18	0.44	0.27	0.08	0.03

a) Find the expected value of the number of credit cards that each customer has.

b) Is the vice president correct?

3) An insurance company insures a person's antique coin collection worth $20,000 for an annual premium of $300. If the company figures that the probability of the collection being stolen is 0.002, what will be the company's expected profit?

4) If a person rolls doubles when she tosses two dice, she wins $5. What are her expected winnings for this game?

5) A lottery offers one $1000 prize, one $500 prize, and five $100 prizes. One thousand tickets are sold at $3 each.

a) Complete the probability distribution below that models the possible results in the lottery.

Winnings = X	$997	$497	$97	$ -3
P(X = x)				

b) What is the expected value of the result of purchasing a ticket in this lottery?