

Name _____

Investigation 13: What Is the Expected Cost to Raise a Child?

Exit Ticket

A mobile phone company offers an optional protection that a customer can choose that will pay for repairs if the phone is damaged in an accident. The plan cost \$50. The retailer has determined that the typical cost to repair a broken phone is \$150. Let R be the number of repairs a randomly chosen customer will use under this plan. Following is the probability distribution for R .

R	$P(R)$
0	0.80
1	0.17
2	0.02
3	0.01

1. What is the expected value of R , the number of repairs needed by a randomly selected customer?
2. Let C represent the amount it will cost the phone company in repairs for a randomly selected customer. Find the expected value of C .
3. What is the expected amount of profit the company will make from a randomly selected customer?