Assignment

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Question 10.13.3.40

A Lot consists of 48 mobile phones of which 42 are good, 3 have only minor defects and 3 have major defects.Varnika will buy a phone if it is good but the trader will only buy a mobile if it has no major defects. One phone is selected at random from the lot. What is the probability that it is

1) acceptable to Varnika?
2) accepatble to the trader?

Solution: Then

Random variable	values	Events
X	0	The Mobile is good
	1	The Mobile has major defects
	2	The Mobile has minor defects

1) Varnika buys a mobile
   Varnika buys if the mobile is good

$$\Pr\left(X_1 = 0\right) = \frac{42}{48} \tag{1}$$

$$= \frac{7}{8} \tag{2}$$

2) Trader will buy a mobile
   The trader buys if the mobile does not have major defects

$$1 - \Pr\left(X_1 = 1\right) = 1 - \frac{3}{48} \tag{3}$$

$$= \frac{15}{16} \tag{4}$$