

# 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) acceptable 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)

$$\Pr(X_1 = 0) = \frac{42}{48} \quad (1)$$

$$= \frac{7}{8} \quad (2)$$

2)

$$1 - \Pr(X_1 = 1) = 1 - \frac{3}{48} \quad (3)$$

$$= \frac{15}{16} \quad (4)$$