

**1. Problem**

In a deck of strange cards, there are 1439 cards. Each card has an image and a color. The amounts are shown in the table below.

	black	blue	green	indigo	yellow
dog	78	44	84	42	57
flower	14	34	48	19	99
pig	62	63	54	53	55
tree	27	97	67	25	39
wheel	64	90	85	60	79

- (a) What is the probability a random card is a flower given it is black?
- (b) What is the probability a random card is indigo?
- (c) What is the probability a random card is a dog?
- (d) What is the probability a random card is yellow given it is a wheel?
- (e) What is the probability a random card is either a flower or green (or both)?
- (f) What is the probability a random card is both a pig and yellow?

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1. (a)  $P(\text{flower given black}) = \frac{14}{78+14+62+27+64} = 0.0571$   
(b)  $P(\text{indigo}) = \frac{42+19+53+25+60}{1439} = 0.138$   
(c)  $P(\text{dog}) = \frac{78+44+84+42+57}{1439} = 0.212$   
(d)  $P(\text{yellow given wheel}) = \frac{79}{64+90+85+60+79} = 0.209$   
(e)  $P(\text{flower or green}) = \frac{14+34+48+19+99+84+48+54+67+85-48}{1439} = 0.35$   
(f)  $P(\text{pig and yellow}) = \frac{55}{1439} = 0.0382$
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