

Practice 85

FOR USE WITH SECTION 13.3

The following table lists the kinds of volunteer work undertaken by students at a high school on Community Action Day.

	Blue Team	Red Team	Green Team	Yellow Team	Total
Litter Pickup	40	50	25	30	145
Urban Gardening	35	45	50	35	165
Day Care	55	25	35	45	160
Homeless Shelter	30	35	30	40	135
Total	160	155	140	150	605

Suppose a student participating in Community Action Day is chosen at random. Find each probability.

- $P(\text{green})$
- $P(\text{homeless shelter})$
- $P(\text{day care} \mid \text{blue})$
- $P(\text{urban gardening} \mid \text{green})$
- $P(\text{litter pickup} \mid \text{yellow})$
- $P(\text{red} \mid \text{homeless shelter})$
- $P(\text{red or green} \mid \text{urban gardening})$
- $P(\text{yellow} \mid \text{day care or litter pickup})$

9. On your first stroke on one hole of a miniature golf course, you can hit the ball (1) through the tunnel, (2) around the tunnel, or (3) into the rough. The probabilities associated with these outcomes are (1) 30%, (2) 60%, and (3) 10%. The probabilities of then hitting the ball into the cup on your second stroke are (1) 50%, (2) 20%, and (3) 5%. Find the probability of hitting the ball into the cup in two strokes.

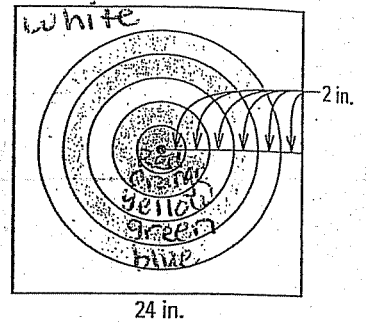
Two cards are drawn at random from a standard deck of 52 playing cards. The first card is *not* returned to the deck before the second card is drawn. Find the probability of each event.

- The first card is a heart and the second card is another red card.
- The second card is a face card, given that the first card was not a face card.
- Both cards are 10s.
- The second card is a spade, given that the first card was a diamond.
- The first card is a face card and the second card is a club. (*Hint*: Consider two possibilities: The first card is a club, or the first card is not a club.)
- Writing** In the experiment above, is it more likely that the two cards picked will be of the same color or of different colors? Explain your answer.

Show work below & #work

GEOMETRY CONNECTION Find the probability that a dart thrown at the square target shown will hit the given region. Assume the dart is equally likely to hit any point inside the target. Round to nearest thousandth.

- 30. the red center
- 31. the white border
- 32. the red center or the white border
- 33. the four rings or the red center
- 34. the yellow or green ring



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