

Ch. 5 Extra Practice

1. Suppose that at the beginning of the season the odds in favour of the Canucks winning the Stanley Cup are estimated to be 1:99.
 - a) Estimate the probability that the Canucks will win the Stanley Cup.
 - b) Estimate the odds against the Canucks winning the Stanley Cup.

2. A bag of marbles contains 2 red marbles, 3 blue marbles and 5 green marbles.
 - a) What is the probability of choosing a green marble?
 - b) What are the odds in favour of choosing a blue marble?
 - c) What are the odds against choosing a red marble?

3. Alex, Brian and Cole are running in a 10 person race. Determine the probability that they will come in 1st, 2nd and 3rd place, respectively.

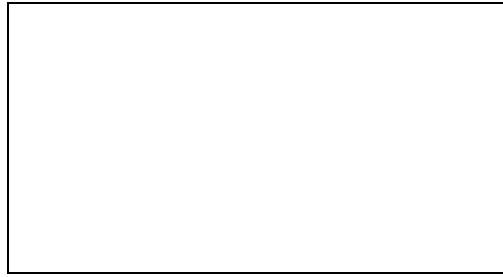
4. In the game of Crazy Eights, each player is dealt 8 cards from a well-shuffled standard deck of 52 playing cards. Determine the probability that a player is dealt:
 - a) all hearts.
 - b) all the aces.

5. Mark surveyed 100 people at the local Tim Horton's. 70 people ordered coffee (C), 40 people ordered a doughnut (D), and 10 people ordered something else.
 - a) Draw a Venn diagram of these sets.
 - b) Determine the following:

i) $n(C) =$	iii) $n(C \cap D) =$	v) $n(D \setminus C) =$
ii) $n(D) =$	iv) $n(C \cup D) =$	vi) $n(C \setminus D) =$

6. Jamal asked 50 people what type of television shows they like. 15 people like comedy shows, but not drama shows. 10 people like drama shows, but not comedy shows. 5 people liked neither type of show.

a) Draw a Venn diagram of these sets.



b) What is the probability that a randomly selected person liked both types of shows?

7. Which of the following are mutually exclusive events?

- a) Rolling a double or rolling a sum of 4 when rolling two dice.
- b) Rolling a sum of 3 or a sum of 4 when rolling two dice.
- c) Drawing a red card or a spade from a standard deck of 52 playing cards.
- d) Drawing a black card or a spade from a standard deck of 52 playing cards.

8. Enzo rolls two standard dice. Determine the probability of each event.

	1	2	3	4	5	6
1	(1,1)	(1,2)	(1,3)	(1,4)	(1,5)	(1,6)
2	(2,1)	(2,2)	(2,3)	(2,4)	(2,5)	(2,6)
3	(3,1)	(3,2)	(3,3)	(3,4)	(3,5)	(3,6)
4	(4,1)	(4,2)	(4,3)	(4,4)	(4,5)	(4,6)
5	(5,1)	(5,2)	(5,3)	(5,4)	(5,5)	(5,6)
6	(6,1)	(6,2)	(6,3)	(6,4)	(6,5)	(6,6)

- a) Rolling a double or rolling a sum of 4.
- b) Rolling a sum of 3 or a sum of 4.
- c) Rolling a sum less than 3 or a sum greater than 10.
- d) Rolling a 5 or rolling a sum greater than 8.

9. You draw a card at random from a standard deck of 52 playing cards. Determine the probability that you will draw:

- a) A red card or a spade.
- b) A black card or a spade.
- c) A face card or a heart.
- d) An ace or a king.

Answers: 1a) $\frac{1}{100}$ c) 1b) 99:1 2a) $\frac{1}{2}$ 2b) 3:7 2c) 4:1 3) $\frac{1}{720}$ 4a) $\frac{11}{6431950}$ 4b) $\frac{2}{7735}$ 5b) i)70 ii)40 iii)20 iv)90 v)20 vi)50
 6b) $\frac{2}{5}$ 7) B and C 8a) $\frac{2}{9}$ 8b) $\frac{5}{36}$ 8c) $\frac{1}{9}$ 8d) $\frac{4}{9}$ 9a) $\frac{3}{4}$ 9b) $\frac{1}{2}$ 9c) $\frac{11}{26}$ 9d) $\frac{2}{13}$