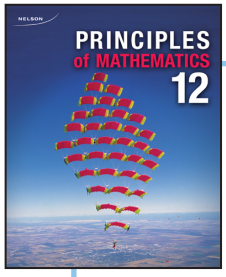


- If you have any difficulty with these solutions, please contact your teacher before continuing.

Page 206, *Question 11*

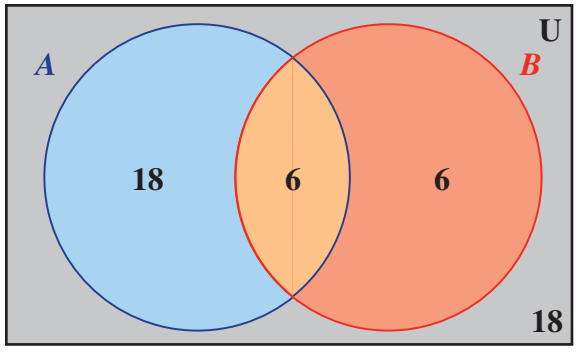
a. Not mutually exclusive – because there are prime numbers that are also odd numbers.

b. Mutually exclusive – because you cannot roll 6 and 8 at the same time.

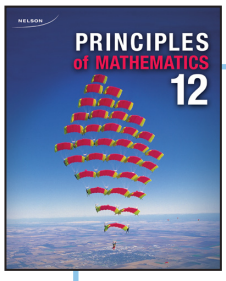
c. Mutually exclusive – because you cannot eat a peach and an apple at the same time. (Assuming you are eating one piece at a time.)

Page 206, *Question 12*

a. A = {face cards}, B = {spades}



b. The events are not mutually exclusive.



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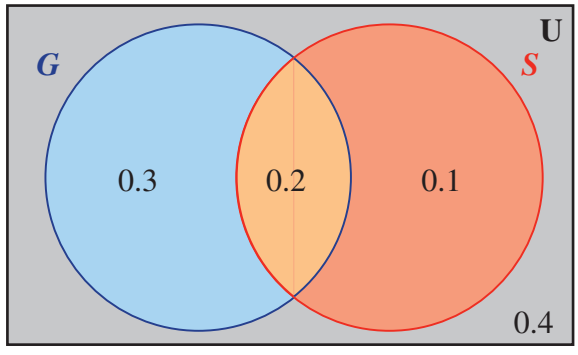
Page 206, *Question 13*

a.

G = {probability Mya will exercise on Sunday} S = {probability Mya will shop on Sunday}



b. The events are not mutually exclusive.

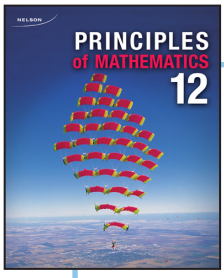
Page 179, *Question 13*

a. Drawing an 8 or a king are mutually exclusive events.

$$P(8 \text{ or king}) = P(8) + P(\text{king})$$

$$= \frac{4}{52} + \frac{4}{52} = \frac{8}{52} \cong 0.154$$

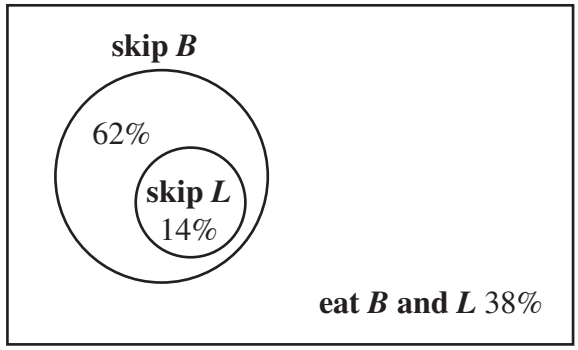
The probability of drawing a king or 8 is about 0.154 or 15.4%.



- If you have any difficulty with these solutions, please contact your teacher before continuing

Page 171, *Your Turn*

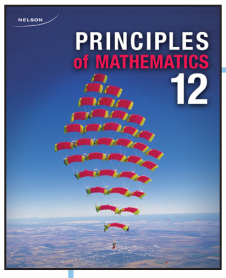
Because skipping lunch and skipping breakfast are not mutually exclusive, the maximum percent of students who eat both breakfast and lunch will occur when skipping lunch is a subset of skipping breakfast. Therefore, the maximum percent is 100% – 62% = 38%.



Page 173, *Your Turn*

a. With the new repair costs, there is a 32% chance that the extended warranty would save her money and a 68% chance that it would not. She should still not buy it because she is more likely to lose money.

b. Now, there is a 39% chance that the warranty will save her money. It would be understandable if she decided not to buy the warranty. However, there is a 10% chance that she will have to pay repairs of $1140; therefore, she might not want to take this risk.



- If you have any difficulty with these solutions, please contact your teacher before continuing

Page 174, *Your Turn*

$P(L \cup S) = 100\% - 27\% = 73\%$ ✓

$P(L \cup S) = P(L) + P(S) - P(L \cap S)$

$73\% = 56\% + 49\% - P(L \cap S)$

$P(L \cap S) = 56\% + 49\% - 73\% = 32\%$ ✓

$P(S \setminus L) = P(S) - P(S \cap L)$

$P(S \setminus L) = 49\% - 32\% = 17\%$ ✓