1. Answers

2. Answers

3. Answers

1. Answers

2.1 $P(\text{Iwo heads}) = \frac{n(S)}{n(S)}$ $P(\text{Iwo heads}) = \frac{117}{300} \checkmark = \frac{39}{100} \checkmark$ 2.2 $P(\text{A head and a tail}) = \frac{n(\text{A head and a tail})}{n(S)}$

Activity 4.8.1: Experimental and Theoretical Probability

Total points = 39

1.1 $P(\text{heads}) = \frac{n(\text{heads})}{n(S)} \checkmark = \frac{75}{120} \checkmark = \frac{5}{8} \checkmark$ 1.2 $P(\text{tails}) = \frac{n(\text{tails})}{n(S)} \checkmark = \frac{45}{120} \checkmark = \frac{3}{8} \checkmark$

 $P(A \text{ head and a tail}) = \frac{80}{300} \checkmark = \frac{4}{15} \checkmark$ 2.3 $P(\text{Two tails}) = \frac{n(\text{Two tails})}{n(S)} \checkmark$

 $P(\text{Two tails}) = \frac{100}{300}$

3.1 $P(\text{red ace}) = \frac{n(\text{red ace})}{n(\text{red ace})}$

 $P(\text{red ace}) = \frac{n(S)}{n(S)}$ $P(\text{red ace}) = \frac{2}{52} \checkmark = \frac{1}{26}$

Answers $2.1 \ P(\text{Two heads}) = \frac{n(\text{Two heads})}{n(S)} \checkmark$ $P(\text{Two heads}) = \frac{117}{300} \checkmark = \frac{39}{100} \checkmark$ $2.2 \ P(\text{A head and a tail}) = \frac{n(\text{A head and a tail})}{n(S)}$

 $P(\text{black number card}) = \frac{18}{52} \checkmark = \frac{9}{26} \checkmark$ 3.3 $P(\text{red face card}) = \frac{n(\text{red face card})}{n(S)} \checkmark$ $P(\text{red face card}) = \frac{6}{52} \checkmark = \frac{3}{25} \checkmark$

4.1 $P(\text{sum of seven}) = \frac{n(\text{sum of seven})}{n(\text{sum of seven})} \checkmark$

 $P(\text{sum is less than 4}) = \frac{3}{36}\checkmark = \frac{1}{12}\checkmark$ 4.4 $P(\text{double}) = \frac{n(\text{double})}{n(S)}\checkmark$ $P(\text{double}) = \frac{6}{36}\checkmark = \frac{1}{6}\checkmark$

4.1 $P(\text{sum of seven}) = \frac{n(\text{sum of seven})}{n(S)}$ $P(\text{sum of seven}) = \frac{6}{36} \checkmark = \frac{1}{6} \checkmark$ 4.2 $P(\text{sum is odd}) = \frac{n(\text{sum is odd})}{n(S)} \checkmark$ $P(\text{sum is odd}) = \frac{18}{36} \checkmark = \frac{1}{2} \checkmark$ 4.3 $P(\text{sum is less than 4}) = \frac{n(\text{sum is less than 4})}{n(S)} \checkmark$

Activity 4.8.1: Experimental and Theoretical Probability

Total points = 39

 $P(\text{A head and a tail}) = \frac{80}{300} \checkmark = \frac{4}{15} \checkmark$ 2.3 $P(\text{Two tails}) = \frac{n(\text{Two tails})}{n(S)} \checkmark$

 $P(\text{Two tails}) = \frac{103}{300} \checkmark$ wers

3.1 $P(\text{red ace}) = \frac{n(\text{red ace})}{n(\text{red ace})} \checkmark$ $P(\text{red ace}) = \frac{n(S)}{n(S)}$ $P(\text{red ace}) = \frac{2}{52} \checkmark = \frac{1}{26}$

3.2 $P(\text{black number card}) = \frac{n(\text{black number card})}{n(\text{black number card})}$

 $P(\text{black number card}) = \frac{18}{n(S)}$ $P(\text{black number card}) = \frac{18}{52} \checkmark = \frac{9}{26} \checkmark$ 3.3 $P(\text{red face card}) = \frac{n(\text{red face card})}{n(S)} \checkmark$ $P(\text{red face card}) = \frac{6}{52} \checkmark = \frac{3}{26} \checkmark$ Answers

4. Answers

4.1 $P(\text{sum of seven}) = \frac{n(\text{sum of seven})}{n(\text{sum of seven})} \checkmark$

 $P(\text{sum of seven}) = \frac{\frac{1}{n(s)}}{n(s)}$ $P(\text{sum of seven}) = \frac{\frac{1}{6} \checkmark}{\frac{1}{6} \checkmark}$ 4.2 $P(\text{sum is odd}) = \frac{n(\text{sum is odd})}{n(s)}$ $P(\text{sum is odd}) = \frac{18}{36} \checkmark = \frac{1}{2} \checkmark$

4.3 $P(\text{sum is less than 4}) = \frac{\sum_{n(\text{sum is less than 4})}{p(s)}$ $P(\text{sum is less than 4}) = \frac{3}{36} \checkmark = \frac{1}{12} \checkmark$ 4.4 $P(\text{double}) = \frac{n(\text{double})}{n(S)} \checkmark$

 $P(\text{double}) = \frac{6}{36} \checkmark = \frac{1}{6}$

Activity 4.8.1: Experimental and Theoretical Probability Total points = 39

1. Answers

1.1 $P(\text{heads}) = \frac{n(\text{heads})}{n(S)} \checkmark = \frac{75}{120} \checkmark = \frac{5}{8} \checkmark$ 1.2 $P(\text{tails}) = \frac{n(\text{tails})}{n(S)} \checkmark = \frac{45}{120} \checkmark = \frac{3}{8} \checkmark$

2. Answers

Answers $2.1 \ P(\text{Two heads}) = \frac{n(\text{Two heads})}{n(S)} \checkmark$ $P(\text{Two heads}) = \frac{117}{300} \checkmark = \frac{39}{100} \checkmark$ $2.2 \ P(\text{A head and a tail}) = \frac{n(\text{A head and a tail})}{n(S)}$

 $P(A \text{ head and a tail}) = \frac{80}{300} \checkmark = \frac{4}{15} \checkmark$ 2.3 $P(\text{Two tails}) = \frac{n(\text{Two tails})}{n(S)} \checkmark$

3. Answers

3.1 $P(\text{red ace}) = \frac{n(\text{red ace})}{n(\text{red ace})}$ $P(\text{red ace}) = \frac{n(S)}{n(S)}$ $P(\text{red ace}) = \frac{2}{52} \checkmark = \frac{1}{26}$

 $P(\text{black number card}) = \frac{18}{52} \checkmark = \frac{9}{26} \checkmark$ 3.3 $P(\text{red face card}) = \frac{n(\text{red face card})}{n(\text{s})}$

 $P(\text{red face card}) = \frac{6}{52} \checkmark = \frac{3}{26} \checkmark$

4.1 $P(\text{sum of seven}) = \frac{n(\text{sum of seven})}{n(\text{sum of seven})} \checkmark$

4.1 $P(\text{sum of seven}) = \frac{n(\text{sum of seven})}{n(S)}$ $P(\text{sum of seven}) = \frac{6}{36} \checkmark = \frac{1}{6} \checkmark$ 4.2 $P(\text{sum is odd}) = \frac{n(\text{sum is odd})}{n(S)} \checkmark$ $P(\text{sum is odd}) = \frac{18}{36} \checkmark = \frac{1}{2} \checkmark$ 4.3 $P(\text{sum is less than 4}) = \frac{n(\text{sum is less than 4})}{n(S)} \checkmark$

 $P(\text{sum is less than 4}) = \frac{3}{36} \checkmark = \frac{1}{12} \checkmark$ 4.4 $P(\text{double}) = \frac{n(\text{double})}{n(S)} \checkmark$ $P(\text{double}) = \frac{6}{36} \checkmark = \frac{1}{6} \checkmark$

Activity 4.8.1: Experimental and Theoretical Probability Total points = 39

1. Answers

1.1 $P(\text{heads}) = \frac{n(\text{heads})}{n(S)} \checkmark = \frac{75}{120} \checkmark = \frac{5}{8} \checkmark$ 1.2 $P(\text{tails}) = \frac{n(\text{tails})}{n(S)} \checkmark = \frac{45}{120} \checkmark = \frac{3}{8} \checkmark$

2. Answers

2.1 $P(\text{Two heads}) = \frac{n(\text{Two heads})}{n(\text{Two heads})}$

 $P(\text{Two heads}) = \frac{n(S)}{n(S)} \checkmark$ $P(\text{Two heads}) = \frac{117}{300} \checkmark = \frac{39}{100} \checkmark$ 2.2 $P(\text{A head and a tail}) = \frac{n(\text{A head and a tail})}{n(S)}$

 $P(A \text{ head and a tail}) = \frac{80}{300} \checkmark = \frac{4}{15}$ 2.3 $P(\text{Two tails}) = \frac{n(\text{Two tails})}{n(\text{Two tails})} \checkmark$

 $P(\text{Two fails}) = \frac{n(S)}{n(S)}$ $P(\text{Two fails}) = \frac{103}{300} \checkmark$

3.1 $P(\text{red ace}) = \frac{n(\text{red ace})}{n(n)} \checkmark$ P(red ace) = $\frac{n(S)}{n(S)}$ P(red ace) = $\frac{2}{52}$ \checkmark = $\frac{1}{26}$

3.2 $P(\text{black number card}) = \frac{n(\text{black number card})}{n(\text{black number card})}$

 $P(\text{black number card}) = \frac{18}{52} \checkmark = \frac{9}{26} \checkmark$ 3.3 $P(\text{red face card}) = \frac{n(\text{red face card})}{n(9)}$

 $P(\text{red face card}) = \frac{6}{52} \checkmark = \frac{3}{26} \checkmark$

4.1 $P(\text{sum of seven}) = \frac{n(\text{sum of seven})}{n(\text{sum of seven})} \checkmark$ $P(\text{sum of seven}) = \frac{\frac{1}{6} \cdot \frac{1}{6} \cdot \frac{1}{6}}{n(\text{S})}$ $P(\text{sum is odd}) = \frac{n(\text{sum is odd})}{n(\text{S})}$

 $P(\text{sum is odd}) = \frac{18}{36} \checkmark = \frac{1}{2} \checkmark$

4.3 $P(\text{sum is less than 4}) = \frac{n(\text{sum is less than 4})}{n(S)}$ $P(\text{sum is less than 4}) = \frac{3}{36} \checkmark = \frac{1}{12} \checkmark$ 4.4 $P(\text{double}) = \frac{n(\text{double})}{n(S)} \checkmark$

 $P(\text{double}) = \frac{6}{36} \checkmark = \frac{1}{6}$