1. Answers

   1.1 $P(\text{heads}) = \dfrac{n(\text{heads})}{n(S)}\ \checkmark = \dfrac{75}{120}\ \checkmark = \dfrac{5}{8}\ \checkmark$

   1.2 $P(\text{tails}) = \dfrac{n(\text{tails})}{n(S)}\ \checkmark = \dfrac{45}{120}\ \checkmark = \dfrac{3}{8}\ \checkmark$

2. Answers

   2.1 $P(\text{Two heads}) = \dfrac{n(\text{Two heads})}{n(S)}\ \checkmark$

   $P(\text{Two heads}) = \dfrac{117}{300}\ \checkmark = \dfrac{39}{100}\ \checkmark$

   2.2 $P(\text{A head and a tail}) = \dfrac{n(\text{A head and a tail})}{n(S)}\ \checkmark$

   $P(\text{A head and a tail}) = \dfrac{80}{300}\ \checkmark = \dfrac{4}{15}\ \checkmark$

   2.3 $P(\text{Two tails}) = \dfrac{n(\text{Two tails})}{n(S)}\ \checkmark$

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

3. Answers

   3.1 $P(\text{red ace}) = \dfrac{n(\text{red ace})}{n(S)}\ \checkmark$

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

   3.2 $P(\text{black number card}) = \dfrac{n(\text{black number card})}{n(S)}\ \checkmark$

   $P(\text{black number card}) = \dfrac{18}{52}\ \checkmark = \dfrac{9}{26}\ \checkmark$

   3.3 $P(\text{red face card}) = \dfrac{n(\text{red face card })}{n(S)}\ \checkmark$

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

4. Answers

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

   $P(\text{sum of seven}) = \dfrac{6}{36}\ \checkmark = \dfrac{1}{6}\ \checkmark$

   4.2 $P(\text{sum is odd}) = \dfrac{n(\text{sum is odd})}{n(S)}\ \checkmark$

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

   4.3 $P(\text{sum is less than 4}) = \dfrac{n(\text{sum is less than 4})}{n(S)}\ \checkmark$

   $P(\text{sum is less than 4}) = \dfrac{3}{36}\ \checkmark = \dfrac{1}{12}\ \checkmark$

   4.4 $P(\text{double}) = \dfrac{n(\text{double})}{n(S)}\ \checkmark$

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