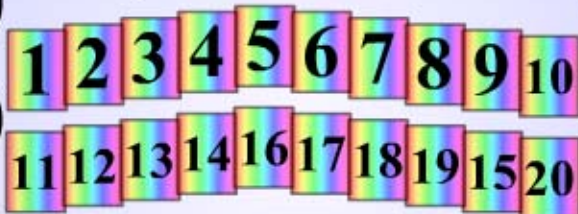


**OBJECTIVE:** Students will be able to calculate the probability of a single event as a ratio of *favorable outcomes* to *possible outcomes*.

**CHECKPOINT:**

Sharla has TWENTY cards, numbered 1 - 20.



If Sharla randomly picks one of the cards, what is the probability that the card number will be less than 7?

**REACH:**

Sam has two regular six-sided dice.



If he rolls them at the same time, what is the probability that the total of the dice will be 2, 3, or 12?

## LAUNCH

**1** The spinner shown below is fair.



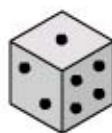
If you spin the spinner 100 times, how many times would you guess will it land on:

a) Red?

b) Green?

c) Blue?

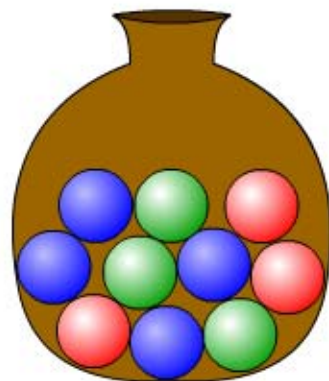
**2** When rolling a fair six-sided die, how many possible outcomes exist?



**3** Anna is playing a board game, where she must roll a single six-sided die. She will score a point if she rolls a 3 or less. What is the probability that Anna rolls a 3, 2, or a 1?

**4** Zack has a bag containing 4 blue marbles, 3 red marbles, and 3 green marbles.

If Zack randomly draws one marble from the bag, what is the probability that he pulls out a blue marble?



A standard deck of playing cards contains 52 cards.

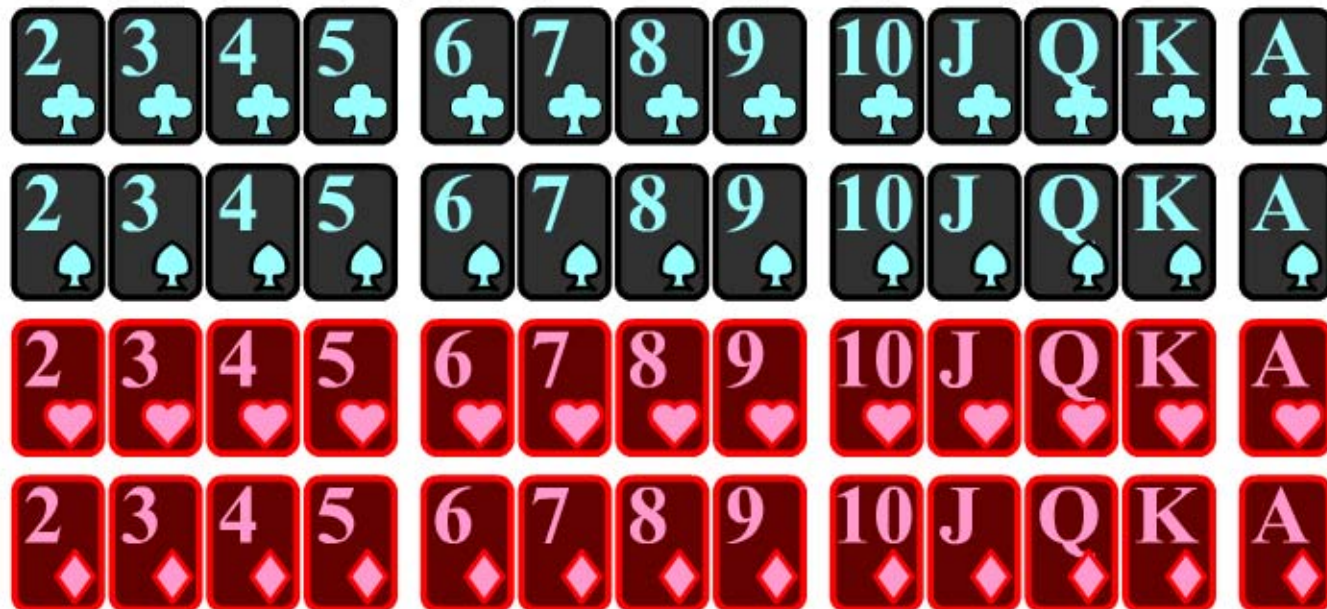
The cards are divided into **FOUR** suits:

Clubs, Spades, **Hearts**, **Diamonds**



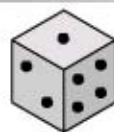
Each suit contains 13 cards:

2, 3, 4, 5, 6, 7, 8, 9, 10, Jack, Queen, King, Ace



- 5** If you randomly select one card, what is the probability that it is a Heart?
- 6** If you randomly select one card, what is the probability that it is black?
- 7** If you randomly select one card, what is the probability that it is an Ace?

Calculate each dice probability.



**8** If you roll a fair die, what is the probability that you roll a number bigger than TWO?

**9** If you roll a fair die, what is the probability that you roll a number bigger than FOUR?

**10** If you roll a fair die, what is the probability that you roll a number bigger than SIX?

**11** If you roll a fair die, what is the probability that you roll a ONE or a SIX?

**12** If you roll a fair die, what is the probability that you roll a FIVE?

Calculate each card probability.



- 13** If you draw one card from a standard deck, what is the probability that you draw a CLUB?
  
- 14** If you draw one card from a standard deck, what is the probability that you draw a TEN?
  
- 15** If you draw one card, what is the probability that you draw a RED TWO?
  
- 16** If you draw one card, what is the probability that you draw a BLACK card OR a QUEEN?
  
- 17** If you draw one card from a standard deck, what is the probability that you draw a card that is both RED and a KING?

## CONCLUSION

- 18** A 4-character password is to be **RANDOMLY** created from the letters **W-X-Y-Z**, with no repeating.



What is the probability that the password ends with a **W**?

**19** If you flip a coin twice, what is the probability that it will come up heads both times?

**20** Annie is going to draw a card from a standard deck, and then put it back in the deck. After that, Deanna will also draw a card and put it back.



What is the probability that both Annie and Deanna draw a Heart?



Students will be able to calculate the probability of a single event.

Were you 100% focused and engaged during today's lesson?

 Yes No %

Rate your understanding of the instructional objective.

 4

completely understand

 3

mostly understand

 2

understand a little

 1

a bit confused

 0

completely confused

Please take a minute to help me gauge your understanding by answering the following question.

A game show has a grab bag containing:

**FOUR \$10 bills,**  
**THREE \$20 bills,**  
**TWO \$50 bills,**  
and **ONE \$100 bill.**

If Kwasi reaches into the bag and randomly pulls out a bill, what is the probability that he will get a \$50 bill?

Students will be able to calculate the probability of a single event.

Were you 100% focused and engaged during today's lesson?

 Yes No %

Rate your understanding of the instructional objective.

 4

completely understand

 3

mostly understand

 2

understand a little

 1

a bit confused

 0

completely confused

Please take a minute to help me gauge your understanding by answering the following question.

A game show has a grab bag containing:

**FOUR \$10 bills,**  
**THREE \$20 bills,**  
**TWO \$50 bills,**  
and **ONE \$100 bill.**

If Kwasi reaches into the bag and randomly pulls out a bill, what is the probability that he will get a \$50 bill?