LESSON MAKER PRO

# Chance Check

*Find probabilities and compare what might happen.*

**GRADE 7 · 7A.DSP.C.29**

**7A.DSP.C.29** "Use a number between 0 and 1 to represent the probability of a chance event occurring, explaining that larger numbers indicate greater likelihood of the event occurring, while a number near zero indicates an unlikely event."

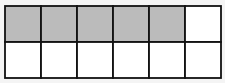
NAME _____ DATE _____

## PROBABILITY IN NUMBERS

Probability is a number from 0 to 1. When outcomes are equally likely, divide the number of outcomes you want by the total number of outcomes. Larger probabilities mean more likely events; a probability near 0 means an unlikely event.

### WORKED EXAMPLE

Choose one square at random. What is the probability it is shaded?



1. Count 5 shaded squares.
2. Count 12 squares in all.
3. Divide: 5/12.

**Answer: 5/12**

## PRACTICE 4 problems

**1** A bag holds 20 beads. Seven are blue. What is P(blue)?

**ANSWER** _____

**2** A jar holds 9 folded slips. One says WIN. What is P(WIN)?

**ANSWER** _____

**3** Which is more likely, event A with P(A) = 3/8 or event B with P(B) = 1/8?

**ANSWER** _____

**4** An event has probability 1/40. Is it likely or unlikely? Explain.

**ANSWER** _____

## APPLY IT Show your work

**1** Your playlist has 16 songs: 7 pop and 9 hip-hop. On a random shuffle, what is P(hip-hop)? Is hip-hop more likely than pop?

WORK SPACE

**ANSWER** _____

**2** A school fair draws one ticket at random from the box shown. What is P(sticker)? Is a sticker unlikely compared with a keychain?

**PRIZE TICKETS**

| Prize | Tickets |
|---|---|
| Sticker | 1 |
| Keychain | 11 |
| Bookmark | 8 |

**ANSWER** _____

## CHALLENGE One step up

A game has 21 equally likely cards. Nine say BONUS, 4 say RETRY, and the rest say SKIP. What is P(SKIP)? Is SKIP more likely than BONUS? Explain.

WORK SPACE AND ANSWER

**ANSWER KEY**

# Chance Check

**GRADE 7 · 7A.DSP.C.29**

## PART 1 · PRACTICE

| # | PROBLEM | ANSWER |
|---|---|---|
| 1 | A bag holds 20 beads. Seven are blue. What is P(blue)? | **7/20** |
| 2 | A jar holds 9 folded slips. One says WIN. What is P(WIN)? | **1/9** |
| 3 | Which is more likely, event A with P(A) = 3/8 or event B with P(B) = 1/8? | **Event A** |
| 4 | An event has probability 1/40. Is it likely or unlikely? Explain. | **Unlikely, because 1/40 is near 0.** |

## PART 2 · APPLY IT

1. **9/16; yes, hip-hop is more likely.** Nine of the 16 songs are hip-hop, so P(hip-hop) = 9/16. This is greater than P(pop) = 7/16.
2. **1/20; yes, a sticker is less likely than a keychain.** There are 20 tickets, so P(sticker) = 1/20. This is less than P(keychain) = 11/20.

## CHALLENGE

**There are 21 - 9 - 4 = 8 SKIP cards, so P(SKIP) = 8/21. SKIP is less likely than BONUS because 8/21 < 9/21.**

Accept equivalent fractions and decimals. For explanations, accept any correct comparison showing that a smaller probability means a less likely event.