Bee Colonies and Nature's Perfect Ratios

Grade 6 | Math | Nonfiction | Nature Theme | ~144 words | CCSS.MATH.6.RP.A.1

Name: _____ **Date:** _____

READ — READ THIS PASSAGE CAREFULLY. YOU MAY READ IT TWICE.

Honeybees use ratios to maintain their colonies and survive in nature. In a healthy hive, the ratio of worker bees to drones is approximately 100 to 1. Worker bees are female bees that gather nectar and pollen, while drones are male bees whose only purpose is reproduction. A single queen bee can lay up to 2,000 eggs daily during spring months. The ratio of eggs to adult bees helps maintain colony population. Bees also use ratios when collecting nectar. A bee must visit about 50 flowers to create just one teaspoon of honey. This 50 to 1 ratio shows how much work bees invest in their honey production. Additionally, bees communicate through dance movements that express ratios of distance and direction to food sources. These mathematical ratios are essential for bee survival, helping colonies organize work, manage resources, and thrive in their natural environment.

Tip: Read the passage twice before turning to the questions on the next page.

Bee Colonies and Nature's Perfect Ratios

Grade 6 | Math | Nonfiction | Nature Theme | ~144 words | CCSS.MATH.6.RP.A.1 | Questions

✏ **ANSWER** *USE THE PASSAGE ON PAGE 1 TO HELP FIND YOUR ANSWERS.*

MAIN IDEA

1. What is this passage mostly about?

TEXT EVIDENCE

2. What is the ratio of worker bees to drones mentioned in the passage? Provide the exact numbers.

VOCABULARY

3. What does the word 'drones' mean in the passage?

INFERENCE

4. Why might the ratio of worker bees to drones be so unequal in a bee colony?

CAUSE AND EFFECT

5. What happens as a result of a bee visiting approximately 50 flowers?

TEXT EVIDENCE

6. How do bees communicate distance and direction to food sources? What evidence from the passage supports your answer?

✓ ANSWER KEY — Bee Colonies and Nature's Perfect Ratios

Grade 6 | Math | Nonfiction | Nature Theme | ~144 words | CCSS.MATH.6.RP.A.1

TEACHER / PARENT USE ONLY — Suggested answers shown below each question

Honeybees use ratios to maintain their colonies and survive in nature. In a healthy hive, the ratio of worker bees to drones is approximately 100 to 1. Worker bees are female bees that gather nectar and pollen, while drones are male bees whose only purpose is reproduction. A single queen bee can lay up to 2,000 eggs daily during spring months. The ratio of eggs to adult bees helps maintain colony population. Bees also use ratios when collecting nectar. A bee must visit about 50 flowers to create just one teaspoon of honey. This 50 to 1 ratio shows how much work bees invest in their honey production. Additionally, bees communicate through dance movements that express ratios of distance and direction to food sources. These mathematical ratios are essential for bee survival, helping colonies organize work, manage resources, and thrive in their natural environment.

MAIN IDEA

1. What is this passage mostly about?

> The passage explains how honeybees use ratios in their colonies and daily activities to survive in nature.

TEXT EVIDENCE

2. What is the ratio of worker bees to drones mentioned in the passage? Provide the exact numbers.

> According to the passage, the ratio of worker bees to drones is approximately 100 to 1.

VOCABULARY

3. What does the word 'drones' mean in the passage?

> Drones are male bees whose only purpose is reproduction in the hive.

INFERENCE

4. Why might the ratio of worker bees to drones be so unequal in a bee colony?

> Since worker bees do most of the necessary hive tasks like gathering food and caring for young, the colony needs many more female workers than male drones to function properly.

CAUSE AND EFFECT

5. What happens as a result of a bee visiting approximately 50 flowers?

> As a result, the bee produces only one teaspoon of honey, showing the significant effort required for honey production.

TEXT EVIDENCE

6. How do bees communicate distance and direction to food sources? What evidence from the passage supports your answer?

> Bees communicate through dance movements that express ratios of distance and direction to food sources, as stated in the passage.