BeeSmart POLLINATOR PARTNERSHIP School Garden Kit

Buggy Word Problems

Answer Key

1. A bee visits 15 flowers before returning to the nest, and those 15 visits take 20 minutes to complete, how many visits could be completed in an hour?

   60 min. = 1 hr

   60 min. / 20 min. = 3

   3 X 15 visits = **45 bee visits in 1 hour**

2. A large colony of 60,000 bees decides to break into two. How many bees are in each of the new colonies if two-thirds go to one colony and one-third goes to the second colony?

   60,000 bees / 3 = 20,000 bees (1/3 of the total colony)

   Colony A
   20,000 X 2 = **40,000 bees**

   Colony B
   20,000 X 1 = **20,000 bees**

3. 160 ounces of nectar are needed to make one pound of honey and a very large bee can carry 0.1 ounces of nectar per foraging trip. How many foraging trips does the large bee need to make to make a pound of honey? Hint: there are 16 ounces in 1 pound.

   160 ounces nectar = 1 lb of honey

   160 ounces nectar / 0.1 ounces nectar =
   1600 foraging trips to make 1 lb of honey

4. Honey bees beat their wings about 200 times per second giving them their familiar buzzing sound. If they kept beating their wings at a consent rate for an entire minute, how many times would their wings beat during that minute?

   60 seconds = 1 minute

   200 wing beats / 1 second = x / 60 seconds

   x = 12,000 wing beats per minute

5. A honey bee queen is very busy. She lays up to 1,500 eggs every day of her life. At this rate, how many eggs does she lay in a week?

   7 days = 1 week

   1500 eggs / 1 day = x eggs / 7 days

   X = 10,500 eggs per week

6. A worker honey bee can make 2,000 flower visits on a good day. If a colony has 20,000 worker bees, how many flower visits can they make as a colony on a good day?

   2,000 flower visits / 1 worker bee = x / 20,000 worker bees

   x = 40,000,000 visits per day
   or
   $x = 4.0 \times 10^7$ visits per day

7. The foragers from a single honey bee colony will fly 110,000 miles, the equivalent of three orbits around the Earth to make just 2 pounds of honey. How many miles do foragers from a single honey bee colony need to fly to make 1 pound of honey?

   110,000 miles / 2 lbs of honey = x miles / 1 lb of honey

   X = 55,000 miles for 1 lb of honey

8. Honey bees in a hive must eat about 8 pounds of honey to produce just one pound of beeswax. How many pounds of honey are needed to produce a ton of beeswax. Hint: 2,000 pounds = 1 ton

   8 lbs of honey / 1 lb beeswax = x lbs of honey / 2,000 lbs beeswax

   X = 16,000 lbs of honey to produce 1 ton of beeswax

CA Math Standards
Grade 3
Number Sense
1.0 Students understand the place value of whole numbers.
2.0 Students calculate and solve problems involving addition, subtraction, multiplication, and division
Algebra and Functions
1.0 Students select appropriate symbols, operations, and properties to represent, describe, simplify, and solve simple number relationships
Mathematical Reasoning
2.0 Students use strategies, skills, and concepts in finding solutions, including estimation.

Grade 4
Number Sense
3.0 Students solve problems involving addition, subtraction, multiplication, and division of whole numbers and understand the relationships among the operations.
Mathematical Reasoning
1.0 Students make decisions about how to approach problems, through identifying relationships, distinguishing relevant from irrelevant information, determining when and how to break a problem into simpler parts.
2.0 Students use strategies, skills, and concepts in finding solutions

Grade 5
Number Sense
2.0 Students perform calculations and solve problems involving addition, subtraction, and simple multiplication and division of fractions and decimals.
Mathematical Reasoning
1.0 Students make decisions about how to approach problems.
2.0 Students use strategies, skills, and concepts in finding solutions.