

1. What geometric shape do honeybees use to build their combs?

2. One bee can carry 70 milligrams of nectar and 20 milligrams of pollen. Combined, how much weight from pollen and nectar can a bee carry?

3. The average worker bee lives for 45 days in the summer. Approximately how many weeks does it live?

4. A queen bee can lay 3,000 eggs in one day. How many days would it take for her to lay 12,000 eggs?

5. A honey bee visits 2,000 flowers to make a pound of honey. How many flowers would it have to visit to make 8 pounds of honey?

6. Why do you think honeybees use hexagons in their combs rather than circles, squares or triangles?

7. Butterflies vary in size from 1 to 12 inches across. How much bigger is a 10 inch butterfly than the smallest possible butterfly?

8. It takes 10-14 days for a monarch caterpillar to change into a butterfly. Approximately how many weeks does it take?

9. Most butterflies can fly about 9 miles per hour. How long would it take a butterfly to fly 54 miles?

10. A queen bee lays 3,000 eggs a day. How many will she lay in a week?

11. If a butterfly lands on a flower and collects enough pollen to pollinate 3 flowers, how many flowers could get pollinated if the butterfly gets pollen from 10 flowers?

12. If a butterfly lands on a flower and collects enough pollen to pollinate 3 flowers, how many could get pollinated if the butterfly gets pollen from 5 flowers?

13. A bee can fly up 15 miles per hour. How many miles can it travel in a day (24 hours)?

14. A honeybee beats its wings about 200 times per second. How many times can it beat its wings in one minute?

15. There are 325 hummingbird species, but only 8 can be found in the U.S. How many do not live in the U.S.?

16. A nickel weighs 4.5 grams. An average hummingbird weighs 3 grams. How much more does the nickel weigh?



## Math Key

1. What geometric shape do honeybees use to build their combs? **Hexagon**
2. One bee can carry 70 milligrams of nectar and 20 milligrams of pollen. Combined, how much weight from pollen and nectar can a bee carry? **90 milligrams**
3. The average worker bee lives for 45 days in the summer. Approximately how many weeks does it live? **Almost 6.5**
4. A queen bee can lay 3,000 eggs in one day. How many days would it take for her to lay 12,000 eggs? **4**
5. A honey bee visits 2,000 flowers to make a pound of honey. How many flowers would it have to visit to make 8 pounds of honey? **16,000**
6. Why do you think honeybees use hexagons in their combs rather than circles, squares or triangles? **They can be stacked next to each other without space. They are also very strong, use the least amount of building material, and provide the most amount of space to store honey.**
7. Butterflies vary in size from 1 to 12 inches across. How much bigger is a 10 inch butterfly than the smallest possible butterfly? **9**
8. It takes 10-14 days for a monarch caterpillar to change into a butterfly. Approximately how many weeks does it take? **About 1½ to 2**
9. Most butterflies can fly about 9 miles per hour. How long would it take a butterfly to fly 54 miles? **6**
10. A queen bee lays 3,000 eggs a day. How many will she lay in a week? **21,000**
11. If a butterfly lands on a flower and collects enough pollen to pollenate 3 flowers, how many flowers could get pollinated if the butterfly gets pollen from 10 flowers?
12. If a butterfly lands on a flower and collects enough pollen to pollinate 3 flowers, how many could get pollinated if the butterfly gets pollen from 5 flowers? **15**
13. A bee can fly up 15 miles per hour. How many miles can it travel in a day (24 hours)? **360**
14. A honeybee beats its wings about 200 times per second. How many times can it beat its wings one minute? **12,000**
15. There are 325 hummingbird species, but only 8 can be found in the U.S. How many do not live in the U.S.? **317**
16. A nickel weighs 4.5 grams. An average hummingbird weighs 3 grams. How much more does the nickel weigh? **1.5 grams**
17. A ladybug's wings beat over 80 times per second. How many times do they beat in an hour? **288,000**
18. A hummingbird can consume up to half its weight in sugars. A hummingbird weighs 3 grams. How much sugar does it consume? **1.5 grams**
19. One-third of crops produced in the U.S. require pollination. Out of 60 crops, how many require pollination? **20**
20. **True** or false? Bats are a pollinator that can travel at speeds of up to 60 miles per hour.