



incredible!

American Egg Board

Grade 8

Name \_\_\_\_\_ Solving problems, using scientific notation (8.EE.A.4)

# Eggsactly!

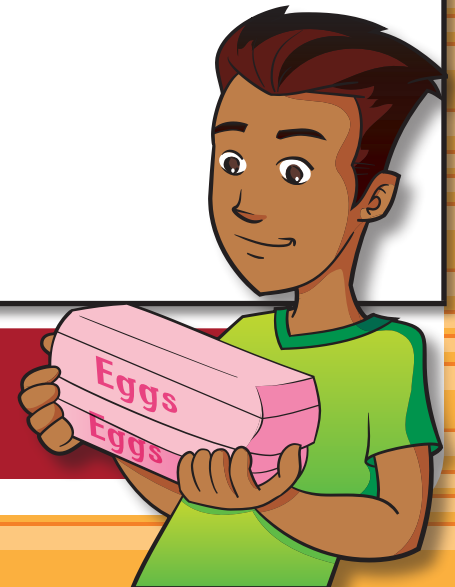


Solve each problem. Show your work and write your answers using scientific notation.

<p><b>1</b> In one year, 30% of all the eggs consumed were egg products such as liquid or powdered eggs. If that 30% equaled <math>2.286 \times 10^{11}</math> eggs, how many eggs altogether were consumed that year?</p>	<p><b>2</b> If food manufacturers produced three billion pounds of egg products each year, how much do they produce each month?</p>	<p><b>3</b> US egg farmers produce about 79 billion eggs each year. If a hen on an egg farm lays 265 eggs a year, about how many egg-laying hens are there on US egg farms?</p>
<p><b>4</b> How much would it cost if 40 egg inspectors worked 60 hours a week for two weeks? Each inspector earns \$30.00 per hour.</p>	<p><b>5</b> About 0.05% of an egg white is the protein avidin. How much of the protein avidin is there in 250 eggs?</p>	<p><b>6</b> If a commercial egg facility processed 18 million eggs in eight hours, how many eggs would it process each hour?</p>

**Bonus:** Use the following data to write a problem with an answer that can be written in scientific notation.

- There are about 280 million egg-laying hens on US egg farms.
- We use about 60% of the 79 billion eggs as consumers.
- The 79 billion eggs produced in the United States each year make up about 10% of the world's egg supply.
- The foodservice industry uses about 9% of the 79 billion eggs.





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**Answer Key for “Eggsactly!”**

1.  $7.62 \times 10^{11}$
2.  $2.5 \times 10^8$
3.  $2.98 \times 10^8$
4.  $1.44 \times 10^5$
5.  $1.25 \times 10^{-1}$
6.  $2.25 \times 10^6$

Bonus: Problems and answers will vary.