

Division in Lizardland

Look at the picture of Lizardland to help you solve the following problems. Use a 200 Chart, counters, your completed My Multiplication Table, or drawings. Write number sentences to show the answers.

- There are 21 children and 3 leaders near Picnic Park. To make sure no one gets lost, the leaders split the children into three equal groups. How many children are in each group?
- The 21 children and their 3 leaders rode the Leaping Lizard Roller Coaster. Four people can ride in a car. How many cars on the roller coaster did they fill?
- Each table in Picnic Park can seat eight people. Are there enough empty tables for the children and their leaders? How do you know?
- The Moore family is having a picnic by Lizard Lake. Mrs. Moore brought three large oranges for her family of six to share. How much will each person get? Write a division sentence for your answer.
- Mrs. Moore brought six cookies for her 3 children to share. How many cookies will each child get? Write a division sentence for your answer.



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Zero

- Mr. Moore baked some cupcakes for his family to share. Unfortunately, he did not remember to bring them, so he had zero cupcakes to share among six people. Use this story to write about the value of $0 \div 6$.

✓ Check-In: Question 7

- The ticket taker has 100 game tokens to give to the first several families who enter the park. Use any strategy to solve the problem. Be sure to write number sentences to show your answers and to include labels.
 - If he gives 4 game tokens to each family that enters the park, how many families will get tokens before he runs out?
 - If he gives 2 game tokens to each family, how many families will enter before he runs out?
 - How many families will get a token if he gives 1 token to each family?
 - If he gives 0 tokens to each family, how many families will enter the park before he runs out of tokens? Use this story to tell about the value of $100 \div 0$.

Division Symbols

The symbols in these division sentences mean the same thing:

- | | | |
|----------------------------------|----------------------------------|---------------------|
| $24 \div 6 = 4$ | $24/6 = 4$ | $6 \overline{)24}$ |
| 8. $16/4 = ?$ | 9. $45 \div 9 = ?$ | 10. $25/5 = ?$ |
| 11. $\frac{?}{8} \overline{)64}$ | 12. $\frac{?}{5} \overline{)40}$ | 13. $35 \div 7 = ?$ |

Fact Families

Multiplication and division facts are related. Questions 14–16 will show you what they have in common. The four facts in each question make up a fact family.

Use your Triangle Flash Cards: 5s and 10s.

- | | | |
|-------------------------|-------------------------|--------------------------|
| 14. A. $4 \times 5 = ?$ | 15. A. $5 \times 9 = ?$ | 16. A. $6 \times 10 = ?$ |
| B. $5 \times 4 = ?$ | B. $9 \times 5 = ?$ | B. $10 \times 6 = ?$ |
| C. $20 \div 5 = ?$ | C. $45 \div 5 = ?$ | C. $60 \div 10 = ?$ |
| D. $20 \div 4 = ?$ | D. $45 \div 9 = ?$ | D. $60 \div 6 = ?$ |

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Questions 1–16

Number sentences will vary.

- 7 children; $21 \div 3 = 7$ children
- 6 cars; $24 \div 4 = 6$ cars
- Yes; $8 \times 3 = 24$ seats
- $\frac{1}{2}$ orange; $3 \div 6 = \frac{1}{2}$ orange
- 2 cookies; $6 \div 3 = 2$ cookies
- Since there are no cupcakes, each person will get 0 cupcakes.
- A. $100 \div 4 = 25$ families
B. $100 \div 2 = 50$ families
C. $100 \div 1 = 100$ families
D. No answer. He will never run out of tokens. An endless amount of people could enter and he would still have the 100 tokens. So $100 \div 0$ does not make sense (it is not defined).

- 4
- 5
- 5
- 8
- 8
- 5
- A. 20
B. 20
C. 4
D. 5
- A. 45
B. 45
C. 9
D. 5
- A. 60
B. 60
C. 6
D. 10

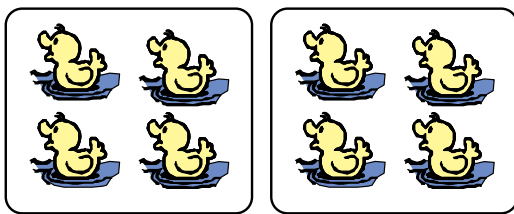
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*Answers and/or discussion are included in the lesson.

Homework (SG p. 209)

Questions 1–19

- | | |
|---|----------|
| 1. A. 24 | 2. A. 24 |
| B. 8 | B. 6 |
| C. 3 | C. 4 |
| D. 24 | D. 24 |
| 3. A. 40 | 4. A. 54 |
| B. 5 | B. 9 |
| C. 8 | C. 6 |
| D. 40 | D. 54 |
| 5. 4 | 6. 9 |
| 7. 10 | 8. 6 |
| 9. 4 | 10. 8 |
| 11. 6 | 12. 0 |
| 13. 5 | 14. 10 |
| 15. 3 | 16. 7 |
| 17. 4 pieces | |
| 18. 3 people | |
| 19. Answers will vary. Possible story for Question 5, $8 \div 2$: There were 8 ducks. They swam into 2 equal groups. There were 4 ducks in each group. | |



Related Multiplication and Division Problems

1. A. $8 \times 3 = ?$	2. A. $6 \times 4 = ?$
B. $24 \div 3 = ?$	B. $24/4 = ?$
C. $24/8 = ?$	C. $24 \div 6 = ?$
D. $3 \times 8 = ?$	D. $4 \times 6 = ?$
3. A. $5 \times 8 = ?$	4. A. $9 \times 6 = ?$
B. $40 \div 8 = ?$	B. $54 \div 6 = ?$
C. $\frac{?}{5} \overline{)40}$	C. $\frac{?}{9} \overline{)54}$
D. $8 \times 5 = ?$	D. $6 \times 9 = ?$

Division Problems

5. $8 \div 2 = ?$	6. $27/3 = ?$
7. $10/1 = ?$	8. $\frac{?}{6} \overline{)36}$
9. $40 \div 10 = ?$	10. $72/9 = ?$
11. $18/3 = ?$	12. $0 \div 7 = ?$
13. $25 \div 5 = ?$	14. $60/6 = ?$
15. $\frac{?}{4} \overline{)12}$	16. $\frac{?}{3} \overline{)21}$

17. The animal keeper throws 24 pieces of duck food into Lizard Lake. Each of the six ducks eats the same amount of food. How many pieces of food did each duck eat?

18. The balloon vendor has 30 balloons. If she sells the balloons in groups of ten, how many people can buy a group of balloons?

19. Write a division story that fits one of the number sentences in Questions 1–16.

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