

Student Guide

Solve these division problems. Check your answers by using a calculator.

- | | | | |
|--|---|--|---|
| 1. A. $6 \div 2$
$60 \div 2$
$600 \div 2$
$6000 \div 2$
$60,000 \div 2$ | B. $9 \div 3$
$90 \div 3$
$900 \div 3$
$9000 \div 3$
$90,000 \div 3$ | C. $12 \div 3$
$120 \div 3$
$1200 \div 3$
$12,000 \div 3$
$120,000 \div 3$ | D. $40 \div 5$
$400 \div 5$
$4000 \div 5$
$40,000 \div 5$
$400,000 \div 5$ |
| 2. A. $60 \div 30$
$600 \div 30$
$600 \div 300$
$6000 \div 30$
$6000 \div 300$ | B. $90 \div 10$
$900 \div 10$
$900 \div 100$
$9000 \div 10$
$9000 \div 100$ | C. $240 \div 40$
$2400 \div 40$
$2400 \div 400$
$24,000 \div 40$
$24,000 \div 400$ | D. $450 \div 5$
$4500 \div 50$
$4500 \div 500$
$45,000 \div 50$
$45,000 \div 500$ |

3. Show or tell how you solved the problems in Question 2C. If you used a rule, describe how the rule works.

Discuss



Solve the following problems. Show how you checked to see if your answer is reasonable.

4. Some campers want to go boating. Each boat can safely hold 4 people. There are 40 boats and 158 campers.
- Can they all go boating?
 - Will all the boats be full?



5. Each camper has a journal and writes four pages a day. Each page holds about 300 words and Luis wrote 6000 words.
- How many pages did Luis use in his journal?
 - How many days did he write?

Estimate Quotients (SG pp. 295–296)

Questions 1–12

- 3; 30; 300; 3000; 30,000
 - 3; 30; 300; 3000; 30,000
 - 4; 40; 400; 4000; 40,000
 - 8; 80; 800; 8000; 80,000
- 2; 20; 2; 200; 20
 - 9; 90; 9; 900; 90
 - 6; 60; 6; 600; 60
 - 90; 90; 9; 900; 90
- * Answers will vary. See Figures 3 and 4 in the lesson.
- Yes, they can all go boating.
 - No. Two of the boats will have 3 campers.
- 20 pages
 - 5 days
- 30 tents
- About 10 miles
- $240 \div 10 = 24$ people going on the trip.
 $250 \div 48$ people on each bus is about
 $250 \div 50 = 5$. The Wilderness Club will need about five buses.
- Less than 10. Possible response: 120 students will be in the auditorium and 120 in groups. The division number sentence is $120 \div 14$. $120 \div 10 = 12$, so $120 \div 14$ is less than 10. There are less than 10 students in each group.
- They do not have enough bags. Possible response: The division number sentence is $689 \div 7$. $7 \times 100 = 700$. They need about 100 bags, which is more than the 75 bags they have.
- More than 1000. Possible response: The division number sentence is $20,000 \div 18$. $20 \times 1000 = 20,000$. Since there are less than 20 students, they will have to view more than 1000 pictures each.
- Between 130 and 140 stickers. The division number sentence is $1200 \div 9$. These are the multiplication sentences I used to find the range.
 - $9 \times 100 = 900$
 - $9 \times 110 = 990$
 - $9 \times 120 = 1080$
 - $9 \times 130 = 1170$
 - $9 \times 140 = 1260$

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✓ Check-In: Questions 6-7

- A group of campers are setting up tents. Each tent needs 6 poles. There are 180 poles in the box. How many tents can be set up?
- Irma uses a pedometer to count the steps she takes on the hikes each day. On the first day she took 4576 steps, on the second day 6437 steps, and on the third day 9135 steps. If one mile is about 2000 steps, about how many miles did Irma walk over these three days?

Use the *Estimate with Division* pages in the *Student Activity Book* to practice estimating quotients.

Estimation Problems

Write a division number sentence for each question. Then estimate answers to the problems. Show or tell how you made the estimates.

- The Wilderness Club at Bessie Coleman School is taking buses for a field trip to the Ecology Center. There are 240 students and 10 adults. Each bus has 24 seats and each seat holds 2 people. How many buses will they need?
- When the students first arrive at the Ecology Center, half of the 240 students will see a presentation in the auditorium, and the rest will be divided into fourteen groups and go outside. Will there be more or less than ten students in each group?

✓ Check-In: Questions 10-12

- Jacob, Shannon, Lee Yah, and Ming made 689 bird suet bars with a recipe from the Ecology Center. They plan to put about seven in each bag. They have 75 bags. Do they have enough bags?
- Eighteen students took pictures of the field trip for their Wilderness Club web page. Together, they took over 20,000 pictures and have to decide which ones to use. About how many pictures will each student review?
- Maya has a roll of 1200 forest animal stickers. She wants to divide the stickers into nine shares to give out to her friends. If she gives away all the stickers, about how many stickers will be in each share?

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

Homework (SG p. 297)

Questions 1–7

1. **A.** 4; 40; 400; 4000
B. 20; 20; 200; 200
C. 3; 30; 300; 3000
D. 8; 80; 800; 8000
2. **A.** 1; 1; 10; 100; 1000
B. 4; 4; 40; 400; 400
C. 7; 7; 70; 700; 70
D. 6; 6; 60; 600; 60
3. Strategies will vary. Possible response: I know $28 \div 7 = 4$. I used that fact to answer the others. Each time I thought of a multiplication problem like $70 \times ? = 280$. I know $4 \times 7 = 28$ and so $4 \times 70 = 280$.
4. $420 \div 7$; about 60 kabobs
5. $200 \div 9$; between 20 and 30 rocks in each row
6. $6400 \div 3$; about 2100 dollars can be spent on each activity.
7. **A.** $80 \div 15$; about 6 trail rides
B. Jessie will go horse-back riding tomorrow since there are only 5 trail rides today.



Solve these division problems mentally. Check your answers using a calculator.

- | | | | |
|---|--|---|--|
| 1. A. $8 \div 2$
$80 \div 2$
$800 \div 2$
$8000 \div 2$ | B. $20 \div 10$
$200 \div 10$
$2000 \div 10$
$20,000 \div 100$ | C. $27 \div 9$
$270 \div 9$
$2700 \div 9$
$27,000 \div 9$ | D. $48 \div 6$
$480 \div 6$
$4800 \div 6$
$48,000 \div 6$ |
| 2. A. $5 \div 50$
$50 \div 50$
$500 \div 50$
$5000 \div 50$
$50,000 \div 50$ | B. $28 \div 7$
$280 \div 70$
$2800 \div 70$
$28,000 \div 70$
$280,000 \div 700$ | C. $42 \div 6$
$420 \div 60$
$4200 \div 60$
$42,000 \div 60$
$420,000 \div 6000$ | D. $30 \div 5$
$300 \div 50$
$3000 \div 50$
$30,000 \div 500$
$300,000 \div 5000$ |

3. Show or tell how you solved the problems in Question 2B. If you used a rule, describe how the rule works.

Write a division number sentence for each question. Then estimate answers to the problems. Show or tell how you made the estimates.

4. Each camper takes a turn making meals. Nicholas is preparing camp kabobs. He cut up cherry tomatoes, onions, peppers, mushrooms, squash, zucchini and eggplant. He has about 420 vegetable pieces. If he puts seven veggie pieces on each kabob, how many kabobs can he make?
5. Sara collected 200 small rocks. She arranged them in 9 rows. Each row is a different color. About how many rocks are in each row?
6. The Wilderness Club raised \$6400 for three camp activities: boating, horse-back riding, and archery. If about the same amount is spent on each activity, how much money can be spent on each?
7. Jessie just signed up to go horse-back riding. She estimates that 80 campers are already on the list. 15 campers can go on each trail ride. There are 5 trail rides a day.
 - A.** About how many trail rides will go before Jessie gets her turn?
 - B.** Do you think Jessie will go horse-back riding today or tomorrow?

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