

8

Relating Multiplication and Division

Explore



Fifty-six students want to play basketball.
 There are 7 players on a school team.
 How many teams can be made?
 Solve this problem.
 Use any materials you need.
 Record your work.



Show and Share

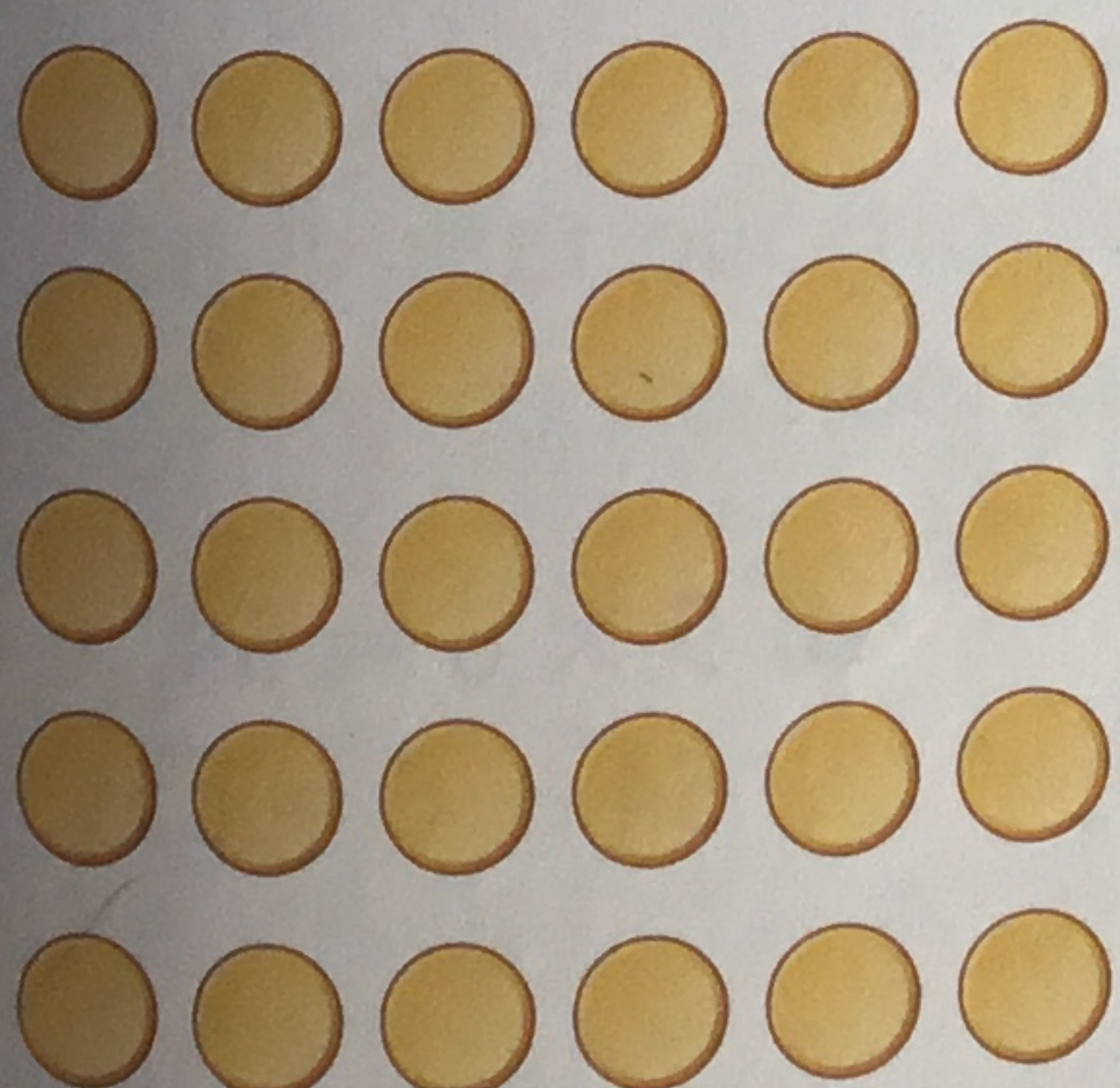
Share your answer with another pair of students.
 What strategy did you use to solve the problem?

Connect

Thirty students want to play volleyball.
 There are 6 players on a team.
 How many teams can there be?

To find how many teams, divide: $30 \div 6$

- Make an array of 30 counters with 6 counters in each row.
 There are 5 rows.



So, $30 \div 6 = 5$
 There can be 5 teams.

- To find $30 \div 6$:
To divide, you can think about multiplication.

Think: 6 times which number is 30?

You know $6 \times 5 = 30$.

So, $30 \div 6 = 5$

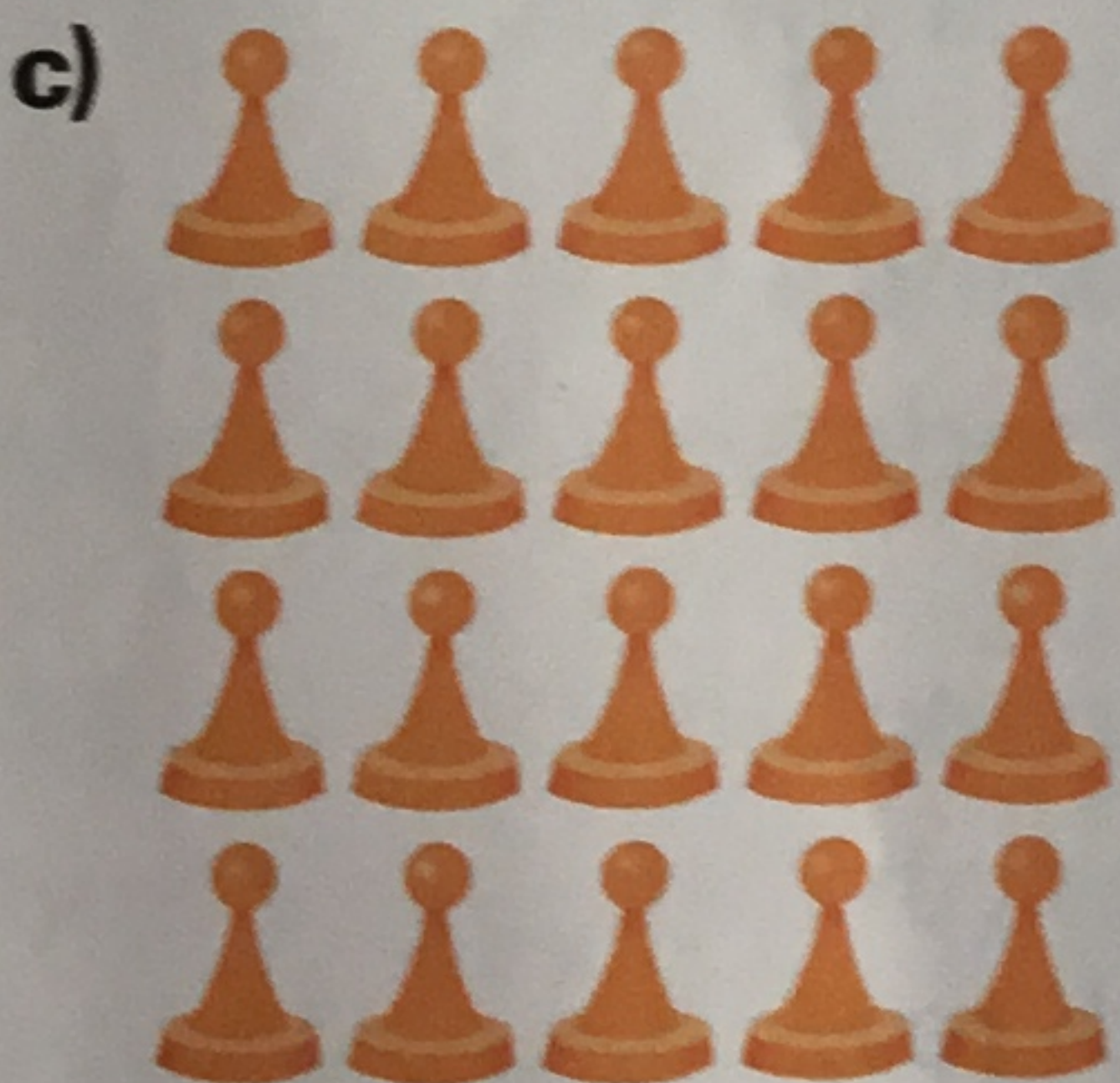
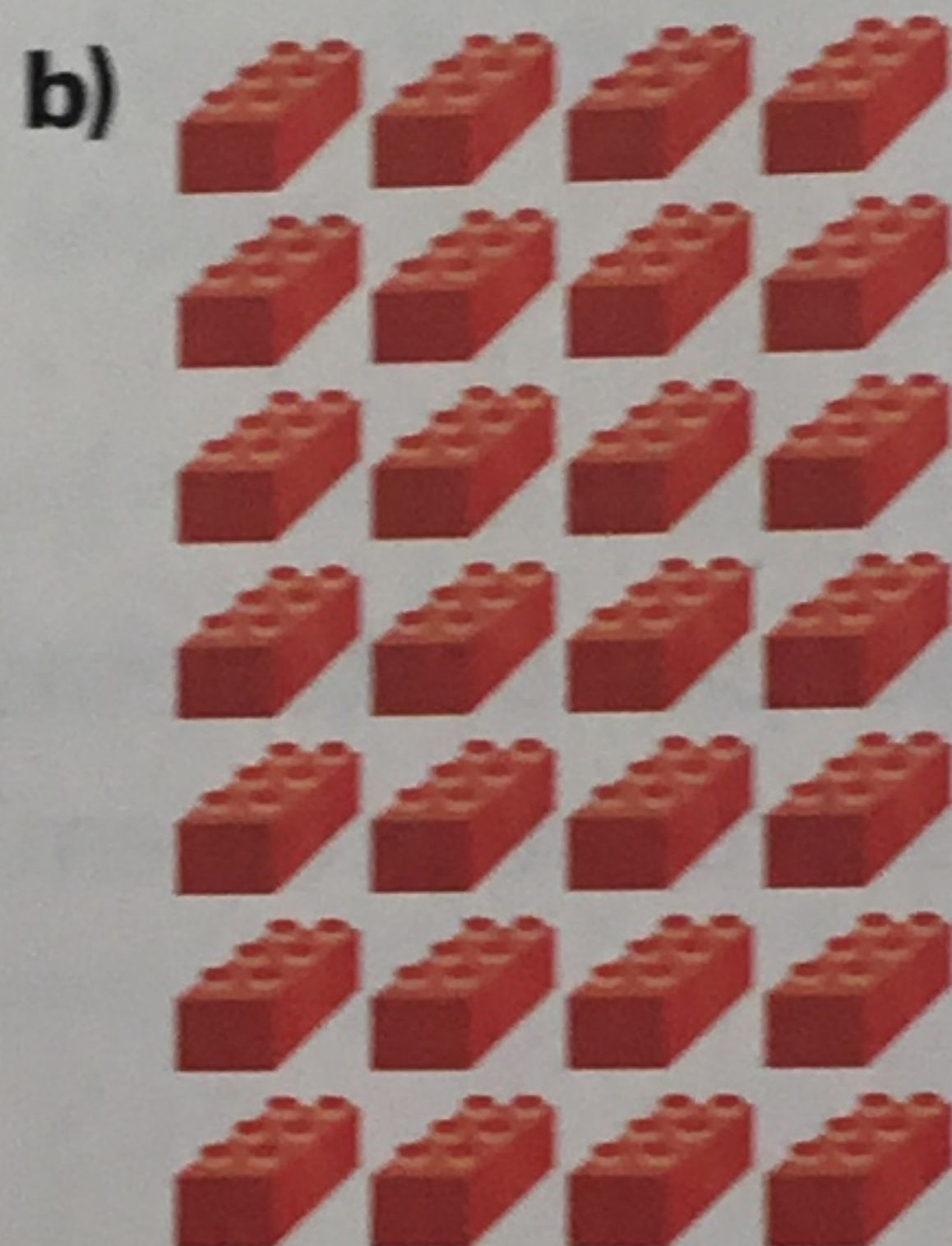
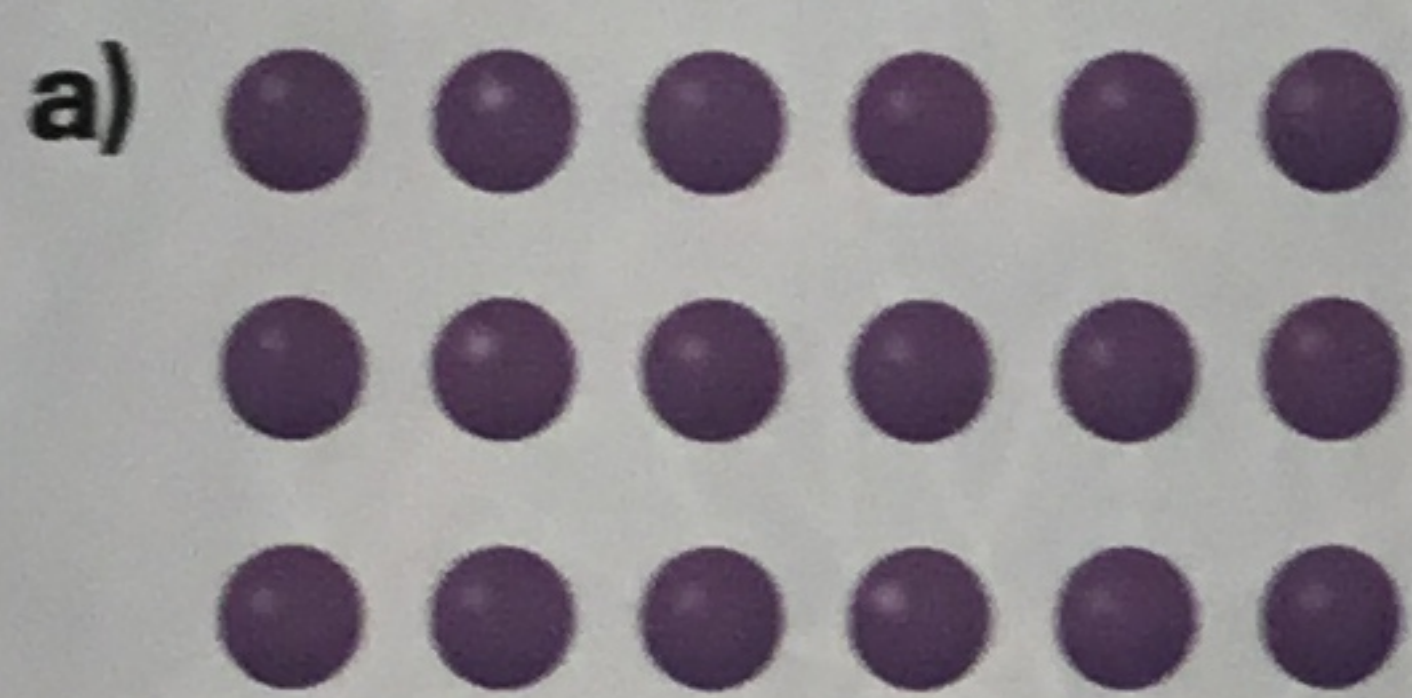
For any division fact,
I can write a
multiplication fact.



Practice

Use counters when they help.

1. Write a multiplication fact and a division fact for each array.



2. a) Draw an array to show $7 \div 7$.

- b) Draw an array to show $7 \div 1$.

3. Use multiplication facts to help you divide.

a) $6 \times 4 = 24$

$24 \div 4 = \square$

b) $5 \times 7 = 35$

$35 \div 7 = \square$

c) $4 \times 2 = 8$

$8 \div 2 = \square$

d) $9 \times 6 = 54$

$54 \div 6 = \square$

4. Divide. Draw a picture to show your work.

a) $3 \div 1$

b) $14 \div 2$

c) $20 \div 4$

d) $42 \div 7$

e) $25 \div 5$

f) $24 \div 6$

g) $21 \div 3$

h) $6 \div 6$

5. Danielle works in a hardware store. She makes packages of washers. Danielle puts 6 washers in each package. She has 36 washers. How many packages can Danielle make?



6. Use a multiplication fact to divide.

a) $15 \div 3$

b) $30 \div 5$

c) $49 \div 7$

d) $12 \div 2$

e) $28 \div 4$

f) $42 \div 6$

g) $6 \div 1$

h) $16 \div 4$

7. Write a story problem you can solve using division. Trade problems with a classmate. Solve your classmate's problem.

8. A class made equal teams of 5 for basketball, and equal teams of 6 for volleyball. Each student in the class was on a team. How many students might be in the class?

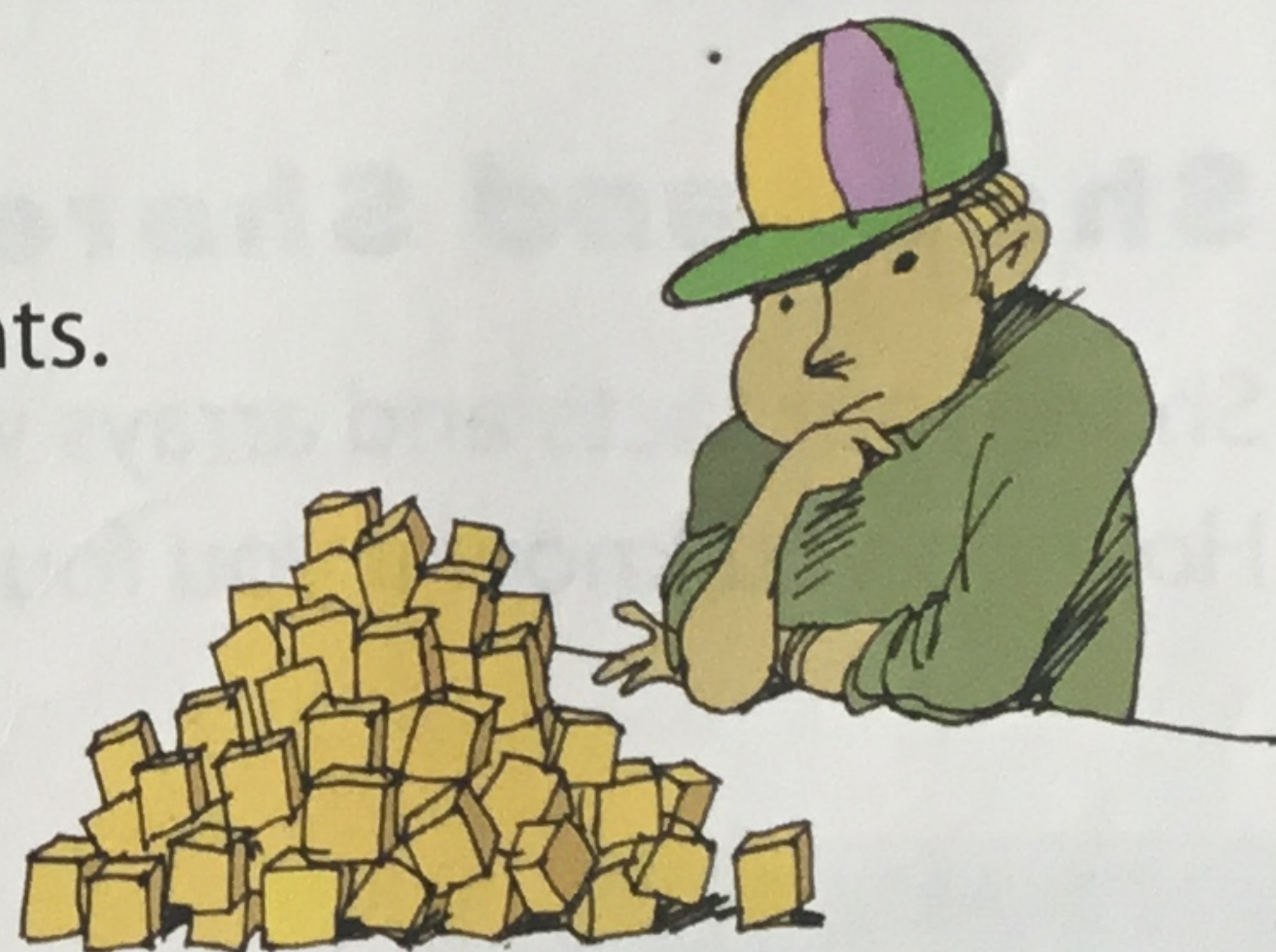
9. Joe has 35 cubes.

He shares the cubes equally among 7 students.

Each student needs 6 cubes.

Does Joe have enough cubes? Explain.

Show your work.



Reflect

How can you use what you have learned about multiplication to divide?

Use words, numbers, or pictures to explain.