Interpreting Quotients of Whole Numbers

Apply the skill to decisions and designs

Name _____ **Date** _____ **Score** _____ / 8

QUICK REVIEW

Division has two meanings. $12 \div 3 = 4$ can mean 12 objects shared among 3 people, giving 4 each. It can also mean 12 objects in groups of 3, making 4 groups. Check with $3 \times 4 = 12$.

Worked example

For $8 \div 2 = 4$, give both a sharing meaning and an equal-groups meaning.

1. Equal sharing: 2 children get 4 each, so $2 \times 4 = 8$.
2. Equal grouping: 4 groups hold 2 each, so $4 \times 2 = 8$.
Answer: Share among 2: 4 each. Groups of 2: 4 groups.

Practice Problems

Show your thinking.

1. 40 counters must fit in boxes of 5. A helper brings 7 boxes. How many more boxes are needed?

2. Share 24 counters equally among 6 children. How many does each child get?

3. Put 35 counters into groups of 7. How many groups can you make?

4. For $12 \div 2 = 6$, give both a sharing meaning and an equal-groups meaning.

5. There are 24 books. A small carton holds 4 books; a large carton holds 6. Find how many of each carton would be needed. Which uses fewer cartons?

6. A class has 30 cards. Five children first share them equally. Then a sixth child joins and all cards are shared again. How does each share change?

7. A delivery has 28 oranges. A cook keeps 4 oranges and packs the rest in bags of 4. How many filled bags leave the kitchen?

8. You need equal teams with exactly 6 children per team. There are 18 children now. Design the smallest total that allows one more full team, and write its division equation.

Answer Key

1. 1 more box.
2. 4 counters per child.
3. 5 groups.
4. Share among 2: 6 each. Groups of 2: 6 groups.
5. 6 small or 4 large; large cartons use 2 fewer.
6. From 6 cards to 5 cards; each first share shrinks by 1.
7. 6 filled bags.
8. 24 children; $24 \div 6 = 4$ teams.

Step-by-Step Solutions

Follow each calculation, then check your own work.

Problem 1

1. The total needs $40 \div 5 = 8$ boxes.

2. $8 - 7 = 1$, so bring 1 more box.

Problem 2

1. Each of the 6 children gets the same share: $24 \div 6 = 4$.

2. Check all shares: $6 \times 4 = 24$ counters.

Problem 3

1. Each group uses 7 counters; 5 groups use $5 \times 7 = 35$.

2. Therefore $35 \div 7 = 5$ counts groups, not counters in one group.

Problem 4

1. Equal sharing: 2 children get 6 each, so $2 \times 6 = 12$.

2. Equal grouping: 6 groups hold 2 each, so $6 \times 2 = 12$.

Problem 5

1. Small cartons: $24 \div 4 = 6$. Large cartons: $24 \div 6 = 4$.

2. Compare carton counts: $6 - 4 = 2$, so choose large cartons to use fewer.

Problem 6

1. First sharing: $30 \div 5 = 6$ cards per child.

2. New sharing: $30 \div 6 = 5$ each; $6 - 5 = 1$ fewer per first child. The total stays 30.

Problem 7

1. Oranges to pack: $28 - 4 = 24$. The removed 4 are not a delivered bag.

2. Pack groups of 4: $24 \div 4 = 6$ bags. Check $6 \times 4 + 4 = 28$ oranges.

Problem 8

1. At first $18 \div 6 = 3$ teams. One more full team needs 6 extra children.

2. The new total is $18 + 6 = 24$, and $24 \div 6 = 4$ teams.

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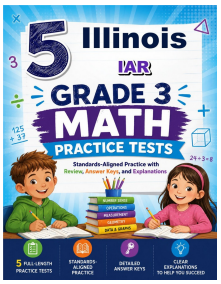

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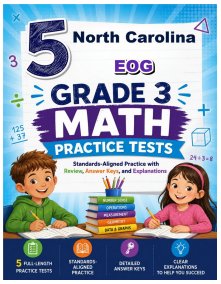

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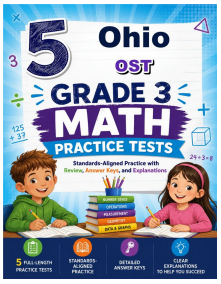

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