

Division with Remainders

When things do not divide evenly, some are left over.

Circle equal groups. The counters not in a group are the remainder.

Example

Circle groups of 5.

$$17 \div 5 = \underline{3} \text{ R } \underline{2}$$



1. Circle groups of 4.

$$23 \div 4 = \underline{\quad} \text{ R } \underline{\quad}$$



2. Circle groups of 7.

$$26 \div 7 = \underline{\quad} \text{ R } \underline{\quad}$$



3. Circle groups of 3.

$$22 \div 3 = \underline{\quad} \text{ R } \underline{\quad}$$



Share the counters equally. Draw them on the plates. Put the rest aside.

Example

Share 14 counters on 4 plates.

$$14 \div 4 = \underline{3} \text{ R } \underline{2}$$

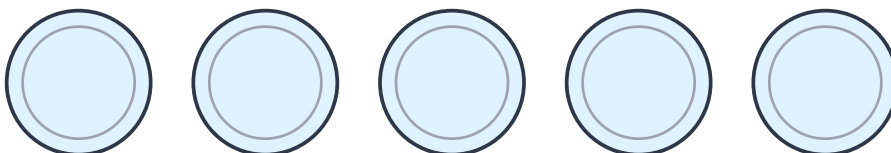


Left over



4. Share 19 counters on 5 plates.

$$19 \div 5 = \underline{\quad} \text{ R } \underline{\quad}$$



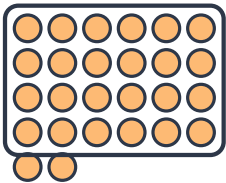
Left over

Division with Remainders

The last row of an array can be short. Those are left over.

Count the full rows and the extra. Then write the division.

Example 26 chairs in rows of 6.

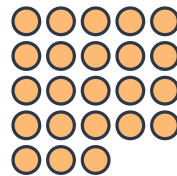


4 full rows

2 left over

$$26 \div 6 = \underline{4} \text{ R } \underline{2}$$

1. 23 plants in rows of 5.

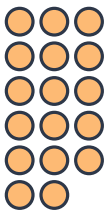


 full rows

 left over

$$23 \div 5 = \underline{\quad\quad} \text{ R } \underline{\quad\quad}$$

2. 17 cupcakes in rows of 3.

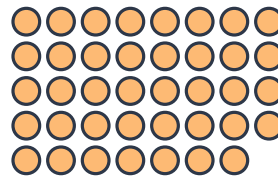


 full rows

 left over

$$17 \div 3 = \underline{\quad\quad} \text{ R } \underline{\quad\quad}$$

3. 39 desks in rows of 8.



 full rows

 left over

$$39 \div 8 = \underline{\quad\quad} \text{ R } \underline{\quad\quad}$$

Is it right? A remainder must be less than the divisor.

Example $29 \div 4 = 6 \text{ R } 5$

Right? Yes **No**

If not, fix it: 7 R 1

4. $38 \div 5 = 7 \text{ R } 3$

Right? Yes No

If not, fix it: R

5. $45 \div 7 = 5 \text{ R } 10$

Right? Yes No

If not, fix it: R

6. $50 \div 6 = 8 \text{ R } 2$

Right? Yes No

If not, fix it: R

Division with Remainders

Divide, multiply, subtract, bring down. Then repeat.

Write the remainder after R. Then write the answer as a mixed number.

Example

$$\begin{array}{r}
 \\
 3 \overline{) 47} \\
 \underline{- 3} \\
 7 \\
 \underline{- 1} 5 \\
 2
 \end{array}$$

Answer: 15 R 2

or 15 $\frac{2}{3}$

1.

$$\begin{array}{r}
 \\
 4 \overline{) 59} \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

or _____ $\frac{\boxed{}}{\boxed{}}$

2.

$$\begin{array}{r}
 \\
 6 \overline{) 83} \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

or _____ $\frac{\boxed{}}{\boxed{}}$

3.

$$\begin{array}{r}
 \\
 2 \overline{) 349} \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

or _____ $\frac{\boxed{}}{\boxed{}}$

4.

$$\begin{array}{r}
 \\
 5 \overline{) 583} \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

or _____ $\frac{\boxed{}}{\boxed{}}$

5.

$$\begin{array}{r}
 \\
 8 \overline{) 763} \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

or _____ $\frac{\boxed{}}{\boxed{}}$

Division with Remainders

Divide. Then decide what the remainder means.

One division, four answers: $45 \div 8 = 5 \text{ R } 5$.

Example

The question tells you what to do with the remainder.

45 people ride to a game. A car holds 8 people. How many cars are needed?

6 cars

Round up

A farmer puts 45 apples in bags of 8. How many bags are full?

5 bags

Drop it

8 friends share 45 stickers. Each gets the same number. How many are left?

5 stickers

Remainder

A 45 inch ribbon is cut into 8 equal pieces. How long is each piece?

$5 \frac{5}{8}$ inches

Fraction

Divide. Write the answer. Circle what you did with the remainder.

1. Mia packs 62 books into boxes. A box holds 5 books. How many boxes does she need?

_____ $\div$ _____ = _____ R _____

Answer: _____ boxes

Round up Drop it Remainder Fraction

2. A camp has 130 children. Each team needs 6 children. How many full teams can they make?

_____ $\div$ _____ = _____ R _____

Answer: _____ teams

Round up Drop it Remainder Fraction

3. Leo deals 75 cards to 4 players, the same number each. How many cards are left over?

_____ $\div$ _____ = _____ R _____

Answer: _____ cards

Round up Drop it Remainder Fraction

4. A 14 foot rope is cut into 3 equal pieces. How long is each piece?

_____ $\div$ _____ = _____ R _____

Answer: _____ feet

Round up Drop it Remainder Fraction

Division with Remainders

Same numbers, different questions. Read each question.

Divide once. Then answer both questions.

Example

52 people go on a trip. A van holds 7 people.

$$\underline{52} \div \underline{7} = \underline{7} \text{ R } \underline{3}$$

a. How many vans do they need?

8 vans

b. How many people ride in the van that is not full?

3 people

1. A farm has 75 eggs. A carton holds 6 eggs.

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ R } \underline{\quad}$$

a. How many cartons can the farm fill?

 cartons

b. How many eggs are left over?

 eggs

2. 4 teams share 13 pizzas equally.

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ R } \underline{\quad}$$

a. How many whole pizzas does each team get?

 pizzas

b. How much pizza does each team get in all?

 pizzas

3. Ava reads 8 pages a day. Her book has 146 pages.

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ R } \underline{\quad}$$

a. How many days does it take her to finish?

 days

b. How many pages does she read on the last day?

 pages

Division with Remainders

When things do not divide evenly, some are left over.

Circle equal groups. The counters not in a group are the remainder.

Example

Circle groups of 5.

$$17 \div 5 = \underline{3} \text{ R } \underline{2}$$



1. Circle groups of 4.

$$23 \div 4 = \underline{\quad} \text{ R } \underline{\quad}$$



2. Circle groups of 7.

$$26 \div 7 = \underline{\quad} \text{ R } \underline{\quad}$$



3. Circle groups of 3.

$$22 \div 3 = \underline{\quad} \text{ R } \underline{\quad}$$



Share the counters equally. Draw them on the plates. Put the rest aside.

Example

Share 14 counters on 4 plates.

$$14 \div 4 = \underline{3} \text{ R } \underline{2}$$

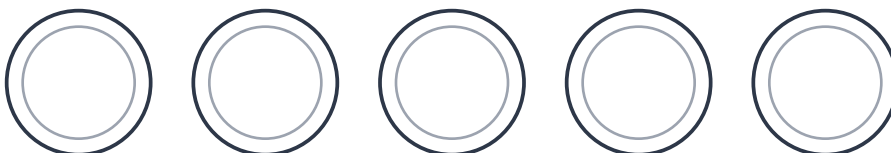


Left over



4. Share 19 counters on 5 plates.

$$19 \div 5 = \underline{\quad} \text{ R } \underline{\quad}$$



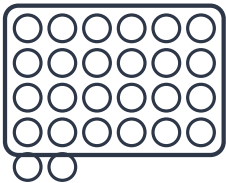
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The last row of an array can be short. Those are left over.

Count the full rows and the extra. Then write the division.

Example 26 chairs in rows of 6.

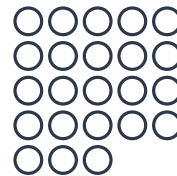


4 full rows

2 left over

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 full rows

 left over

$$23 \div 5 = \underline{\quad\quad} \text{ R } \underline{\quad\quad}$$

2. 17 cupcakes in rows of 3.

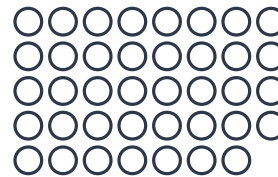


 full rows

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3. 39 desks in rows of 8.



 full rows

 left over

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Divide, multiply, subtract, bring down. Then repeat.

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Example

$$\begin{array}{r} 15 \\ 3 \overline{) 47} \\ \underline{- 3} \\ 17 \\ \underline{- 15} \\ 2 \end{array}$$

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1.

$$\begin{array}{r} \\ 4 \overline{) 59} \\ \\ \\ \\ \\ \\ \\ \end{array}$$

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$$\begin{array}{r} \\ 6 \overline{) 83} \\ \\ \\ \\ \\ \\ \\ \end{array}$$

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or _____ $\frac{\boxed{}}{\boxed{}}$

3.

$$\begin{array}{r} \\ 2 \overline{) 349} \\ \\ \\ \\ \\ \\ \\ \end{array}$$

Answer: _____ R _____

or _____ $\frac{\boxed{}}{\boxed{}}$

4.

$$\begin{array}{r} \\ 5 \overline{) 583} \\ \\ \\ \\ \\ \\ \\ \end{array}$$

Answer: _____ R _____

or _____ $\frac{\boxed{}}{\boxed{}}$

5.

$$\begin{array}{r} \\ 8 \overline{) 763} \\ \\ \\ \\ \\ \\ \\ \end{array}$$

Answer: _____ R _____

or _____ $\frac{\boxed{}}{\boxed{}}$

Division with Remainders

Divide. Then decide what the remainder means.

One division, four answers: $45 \div 8 = 5 \text{ R } 5$.

Example The question tells you what to do with the remainder.

45 people ride to a game. A car holds 8 people. How many cars are needed?

6 cars

Round up

A farmer puts 45 apples in bags of 8. How many bags are full?

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A 45 inch ribbon is cut into 8 equal pieces. How long is each piece?

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Answer: _____ teams

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3. Leo deals 75 cards to 4 players, the same number each. How many cards are left over?

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Answer: _____ cards

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4. A 14 foot rope is cut into 3 equal pieces. How long is each piece?

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Answer: _____ feet

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Same numbers, different questions. Read each question.

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Example

52 people go on a trip. A van holds 7 people.

$$\underline{52} \div \underline{7} = \underline{7} \text{ R } \underline{3}$$

a. How many vans do they need?

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b. How many people ride in the van that is not full?

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1. A farm has 75 eggs. A carton holds 6 eggs.

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ R } \underline{\quad}$$

a. How many cartons can the farm fill?

 cartons

b. How many eggs are left over?

 eggs

2. 4 teams share 13 pizzas equally.

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ R } \underline{\quad}$$

a. How many whole pizzas does each team get?

 pizzas

b. How much pizza does each team get in all?

 pizzas

3. Ava reads 8 pages a day. Her book has 146 pages.

$$\underline{\quad} \div \underline{\quad} = \underline{\quad} \text{ R } \underline{\quad}$$

a. How many days does it take her to finish?

 days

b. How many pages does she read on the last day?

 pages

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2. Circle groups of 7.

$$26 \div 7 = \underline{3} \text{ R } \underline{5}$$



3. Circle groups of 3.

$$22 \div 3 = \underline{7} \text{ R } \underline{1}$$



Share the counters equally. Draw them on the plates. Put the rest aside.

Example Share 14 counters on 4 plates.

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Left over



4. Share 19 counters on 5 plates.

$$19 \div 5 = \underline{3} \text{ R } \underline{4}$$



Left over

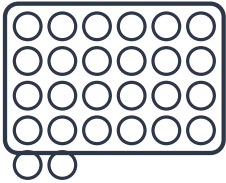


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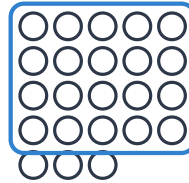


4 full rows

2 left over

$$26 \div 6 = \underline{4} \text{ R } \underline{2}$$

1. 23 plants in rows of 5.

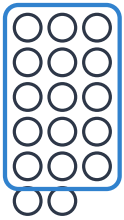


4 full rows

3 left over

$$23 \div 5 = \underline{4} \text{ R } \underline{3}$$

2. 17 cupcakes in rows of 3.

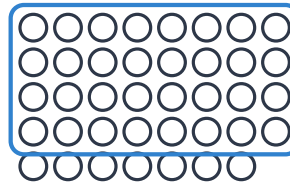


5 full rows

2 left over

$$17 \div 3 = \underline{5} \text{ R } \underline{2}$$

3. 39 desks in rows of 8.



4 full rows

7 left over

$$39 \div 8 = \underline{4} \text{ R } \underline{7}$$

Is it right? A remainder must be less than the divisor.

Example $29 \div 4 = 6 \text{ R } 5$

Right? Yes **No**

If not, fix it: 7 R 1

4. $38 \div 5 = 7 \text{ R } 3$

Right? **Yes** No

If not, fix it: _____ R _____

5. $45 \div 7 = 5 \text{ R } 10$

Right? Yes **No**

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6. $50 \div 6 = 8 \text{ R } 2$

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Division with Remainders

Divide, multiply, subtract, bring down. Then repeat.

Write the remainder after R. Then write the answer as a mixed number.

Example

$$\begin{array}{r} 15 \\ 3 \overline{) 47} \\ \underline{- 3} \\ 17 \\ \underline{- 15} \\ 2 \end{array}$$

Answer: 15 R 2

or 15 $\frac{2}{3}$

1.

$$\begin{array}{r} 14 \\ 4 \overline{) 59} \\ \underline{- 4} \\ 19 \\ \underline{- 16} \\ 3 \end{array}$$

Answer: 14 R 3

or 14 $\frac{3}{4}$

2.

$$\begin{array}{r} 13 \\ 6 \overline{) 83} \\ \underline{- 6} \\ 23 \\ \underline{- 18} \\ 5 \end{array}$$

Answer: 13 R 5

or 13 $\frac{5}{6}$

3.

$$\begin{array}{r} 174 \\ 2 \overline{) 349} \\ \underline{- 2} \\ 14 \\ \underline{- 14} \\ 9 \\ \underline{- 8} \\ 1 \end{array}$$

Answer: 174 R 1

or 174 $\frac{1}{2}$

4.

$$\begin{array}{r} 116 \\ 5 \overline{) 583} \\ \underline{- 5} \\ 8 \\ \underline{- 5} \\ 33 \\ \underline{- 30} \\ 3 \end{array}$$

Answer: 116 R 3

or 116 $\frac{3}{5}$

5.

$$\begin{array}{r} 95 \\ 8 \overline{) 763} \\ \underline{- 72} \\ 43 \\ \underline{- 40} \\ 3 \end{array}$$

Answer: 95 R 3

or 95 $\frac{3}{8}$

Division with Remainders

Divide. Then decide what the remainder means.

One division, four answers: $45 \div 8 = 5 \text{ R } 5$.

Example

The question tells you what to do with the remainder.

45 people ride to a game. A car holds 8 people. How many cars are needed?

6 cars

Round up

A farmer puts 45 apples in bags of 8. How many bags are full?

5 bags

Drop it

8 friends share 45 stickers. Each gets the same number. How many are left?

5 stickers

Remainder

A 45 inch ribbon is cut into 8 equal pieces. How long is each piece?

$5 \frac{5}{8}$ inches

Fraction

Divide. Write the answer. Circle what you did with the remainder.

1. Mia packs 62 books into boxes. A box holds 5 books. How many boxes does she need?

$$\underline{62} \div \underline{5} = \underline{12} \text{ R } \underline{2}$$

Answer: 13 boxes

Round up **Drop it** **Remainder** **Fraction**

2. A camp has 130 children. Each team needs 6 children. How many full teams can they make?

$$\underline{130} \div \underline{6} = \underline{21} \text{ R } \underline{4}$$

Answer: 21 teams

Round up **Drop it** **Remainder** **Fraction**

3. Leo deals 75 cards to 4 players, the same number each. How many cards are left over?

$$\underline{75} \div \underline{4} = \underline{18} \text{ R } \underline{3}$$

Answer: 3 cards

Round up **Drop it** **Remainder** **Fraction**

4. A 14 foot rope is cut into 3 equal pieces. How long is each piece?

$$\underline{14} \div \underline{3} = \underline{4} \text{ R } \underline{2}$$

Answer: $4 \frac{2}{3}$ feet

Round up **Drop it** **Remainder** **Fraction**

Division with Remainders

Same numbers, different questions. Read each question.

Divide once. Then answer both questions.

Example

52 people go on a trip. A van holds 7 people.

$$\underline{52} \div \underline{7} = \underline{7} \text{ R } \underline{3}$$

a. How many vans do they need?

8 vans

b. How many people ride in the van that is not full?

3 people

1. A farm has 75 eggs. A carton holds 6 eggs.

$$\underline{75} \div \underline{6} = \underline{12} \text{ R } \underline{3}$$

a. How many cartons can the farm fill?

12 cartons

b. How many eggs are left over?

3 eggs

2. 4 teams share 13 pizzas equally.

$$\underline{13} \div \underline{4} = \underline{3} \text{ R } \underline{1}$$

a. How many whole pizzas does each team get?

3 pizzas

b. How much pizza does each team get in all?

3 $\frac{1}{4}$ pizzas

3. Ava reads 8 pages a day. Her book has 146 pages.

$$\underline{146} \div \underline{8} = \underline{18} \text{ R } \underline{2}$$

a. How many days does it take her to finish?

19 days

b. How many pages does she read on the last day?

2 pages