

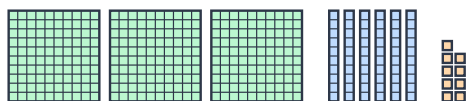
Long Division

Divide by sharing equally and with area models.

Share the blocks equally. Trade 1 hundred for 10 tens if you need to.

Example

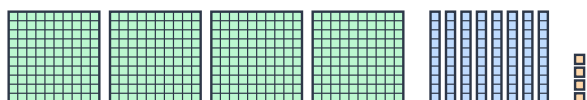
$$369 \div 3 = \underline{123}$$



Each of the 3 groups gets:

Hundreds	Tens	Ones
1	2	3

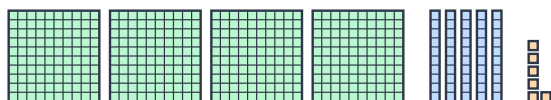
1. $484 \div 4 = \underline{\hspace{2cm}}$



Each of the 4 groups gets:

Hundreds	Tens	Ones

2. $456 \div 3 = \underline{\hspace{2cm}}$



Each of the 3 groups gets:

Hundreds	Tens	Ones

Write the missing side of each part. Add the sides.

Example

$$738 \div 3$$

	200	40	6
3	600	120	18

$$738 \div 3 = \underline{246}$$

3. $856 \div 4$

4	800	40	16

$$856 \div 4 = \underline{\hspace{2cm}}$$

4. $945 \div 5$

5	500	400	45

$$945 \div 5 = \underline{\hspace{2cm}}$$

5. $868 \div 7$

7	700	140	28

$$868 \div 7 = \underline{\hspace{2cm}}$$

Long Division

Divide with partial quotients. Some have a remainder.

Subtract 1,000s, 100s, 10s, then 1s. Add the partial quotients.

Example

6	)	1	5	2	5	
-		1	2	0	0	200
			3	2	5	
-			3	0	0	50
				2	5	
			-	2	4	4
					1	254

Answer: 254 R 1

1.

4	)	2	3	4	7	

Answer: _____ R _____

2.

7	)	3	1	8	5	

Answer: _____ R _____

3.

3	)	4	9	2	7	

Answer: _____ R _____

4.

8	)	5	0	1	8	

Answer: _____ R _____

5.

9	)	7	3	4	5	

Answer: _____ R _____

Long Division

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

Write the remainder after R, then as a fraction over the divisor.

Example

$$\begin{array}{r}
 214 \\
 4 \overline{) 857} \\
 \underline{- 8} \\
 5 \\
 \underline{- 4} \\
 17 \\
 \underline{- 16} \\
 1
 \end{array}$$

Answer: 214 R 1

or 214 $\frac{1}{4}$

1.

$$\begin{array}{r}
 \\
 5 \overline{) 638} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

2.

$$\begin{array}{r}
 \\
 6 \overline{) 929} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

3.

$$\begin{array}{r}
 \\
 3 \overline{) 2743} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

4.

$$\begin{array}{r}
 \\
 7 \overline{) 4187} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

5.

$$\begin{array}{r}
 \\
 9 \overline{) 6239} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

Long Division

Divide by 2-digit numbers.

Use partial quotients. Subtract 100s, 10s, then 1s of the divisor.

Example

$$\begin{array}{r}
 23 \overline{) 1570} \\
 \underline{- 1380} \\
 190 \\
 \underline{- 184} \\
 6
 \end{array}
 \quad
 \begin{array}{r}
 60 \\
 8 \\
 \hline
 68
 \end{array}$$

Answer: 68 R 6

1.

$$\begin{array}{r}
 15 \overline{) 2850} \\
 \\
 \\
 \\
 \\

 \end{array}
 \quad
 \begin{array}{r}
 \\
 \\
 \\
 \\
 \\
 \end{array}$$

Answer: _____ R _____

2.

$$\begin{array}{r}
 18 \overline{) 3746} \\
 \\
 \\
 \\
 \\

 \end{array}
 \quad
 \begin{array}{r}
 \\
 \\
 \\
 \\
 \\
 \end{array}$$

Answer: _____ R _____

Estimate each digit

Round the divisor: 23 is close to 20.

$156 \div 20$ is about 7. But $23 \times 7 = 161$, too big, so the digit is 6.

Use the standard algorithm. Estimate each digit first.

Example

$$\begin{array}{r}
 \\
 23 \overline{) 1564} \\
 \underline{- 138} \\
 184 \\
 \underline{- 184} \\
 0
 \end{array}
 \quad
 \begin{array}{l}
 23 \times 6 \\
 23 \times 8
 \end{array}$$

Answer: 68 R 0

3.

$$\begin{array}{r}
 \\
 32 \overline{) 2272} \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

4.

$$\begin{array}{r}
 \\
 17 \overline{) 4108} \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

Long Division

Estimate first. Then divide and decide what the remainder means.

What does the remainder mean? It depends on the question.

Example

50 cars wait for a ferry. It carries 8 cars each trip. $50 \div 8 = 6 \text{ R } 2$

How many trips does the ferry make?

7 trips

Round up

The last 2 cars need a trip too.

How many trips are full?

6 trips

Drop it

The trip with 2 cars is not full.

How many cars go on the last trip?

2 cars

Remainder

The remainder is the answer.

Estimate first. Then divide. Circle what you did with the remainder.

1. 350 students go on a field trip. Each bus holds 32 students. How many buses do they need?

Estimate: _____

_____ buses

Round up

Drop it

Remainder

2. A baker makes 250 muffins. She packs 12 in each box. How many boxes can she fill?

Estimate: _____

_____ boxes

Round up

Drop it

Remainder

3. Mia gives 345 stickers to 16 friends. Each gets the same number. How many are left over?

Estimate: _____

_____ stickers

Round up

Drop it

Remainder

4. 1,000 people come to a school play. Each row has 24 seats. How many rows do they need?

Estimate: _____

_____ rows

Round up

Drop it

Remainder

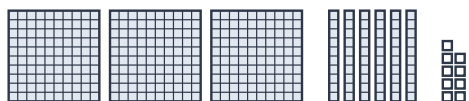
Long Division

Divide by sharing equally and with area models.

Share the blocks equally. Trade 1 hundred for 10 tens if you need to.

Example

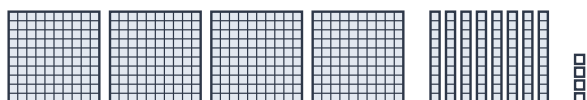
$$369 \div 3 = \underline{123}$$



Each of the 3 groups gets:

Hundreds	Tens	Ones
1	2	3

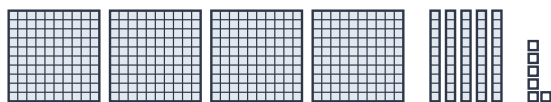
1. $484 \div 4 = \underline{\hspace{2cm}}$



Each of the 4 groups gets:

Hundreds	Tens	Ones

2. $456 \div 3 = \underline{\hspace{2cm}}$



Each of the 3 groups gets:

Hundreds	Tens	Ones

Write the missing side of each part. Add the sides.

Example

$$738 \div 3$$

	<u>200</u>	<u>40</u>	<u>6</u>
3	600	120	18

$$738 \div 3 = \underline{246}$$

3. $856 \div 4$

	<u> </u>	<u> </u>	<u> </u>
4	800	40	16

$$856 \div 4 = \underline{\hspace{2cm}}$$

4. $945 \div 5$

	<u> </u>	<u> </u>	<u> </u>
5	500	400	45

$$945 \div 5 = \underline{\hspace{2cm}}$$

5. $868 \div 7$

	<u> </u>	<u> </u>	<u> </u>
7	700	140	28

$$868 \div 7 = \underline{\hspace{2cm}}$$

Long Division

Divide with partial quotients. Some have a remainder.

Subtract 1,000s, 100s, 10s, then 1s. Add the partial quotients.

Example

6	)	1	5	2	5	
-	1	2	0	0		200
		3	2	5		
-	3	0	0			50
		2	5			
-	2	4				4
		1				254

Answer: 254 R 1

1.

4	)	2	3	4	7	

Answer: _____ R _____

2.

7	)	3	1	8	5	

Answer: _____ R _____

3.

3	)	4	9	2	7	

Answer: _____ R _____

4.

8	)	5	0	1	8	

Answer: _____ R _____

5.

9	)	7	3	4	5	

Answer: _____ R _____

Long Division

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

Write the remainder after R, then as a fraction over the divisor.

Example

$$\begin{array}{r}
 214 \\
 4 \overline{) 857} \\
 \underline{- 8} \\
 5 \\
 \underline{- 4} \\
 17 \\
 \underline{- 16} \\
 1
 \end{array}$$

Answer: 214 R 1

or 214 $\frac{1}{4}$

1.

$$\begin{array}{r}
 \\
 5 \overline{) 638} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

2.

$$\begin{array}{r}
 \\
 6 \overline{) 929} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

3.

$$\begin{array}{r}
 \\
 3 \overline{) 2743} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

4.

$$\begin{array}{r}
 \\
 7 \overline{) 4187} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

5.

$$\begin{array}{r}
 \\
 9 \overline{) 6239} \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

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

Long Division

Divide by 2-digit numbers.

Use partial quotients. Subtract 100s, 10s, then 1s of the divisor.

Example

$$\begin{array}{r}
 23 \overline{) 1570} \\
 \underline{- 1380} \\
 190 \\
 \underline{- 184} \\
 6 \\
 \hline
 68 \text{ R } 6
 \end{array}$$

Answer: 68 R 6

1.

$$\begin{array}{r}
 15 \overline{) 2850} \\
 \\
 \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

2.

$$\begin{array}{r}
 18 \overline{) 3746} \\
 \\
 \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

Estimate each digit

Round the divisor: 23 is close to 20.

$156 \div 20$ is about 7. But $23 \times 7 = 161$, too big, so the digit is 6.

Use the standard algorithm. Estimate each digit first.

Example

$$\begin{array}{r}
 68 \\
 23 \overline{) 1564} \\
 \underline{- 138} 23 \times 6 \\
 184 \\
 \underline{- 184} 23 \times 8 \\
 0
 \end{array}$$

Answer: 68 R 0

3.

$$\begin{array}{r}
 32 \overline{) 2272} \\
 \\
 \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

4.

$$\begin{array}{r}
 17 \overline{) 4108} \\
 \\
 \\
 \\
 \\
 \\
 \\
 \\
 \\

 \end{array}$$

Answer: _____ R _____

Long Division

Estimate first. Then divide and decide what the remainder means.

What does the remainder mean? It depends on the question.

Example

50 cars wait for a ferry. It carries 8 cars each trip. $50 \div 8 = 6 \text{ R } 2$

How many trips does the ferry make?

7 trips

Round up

The last 2 cars need a trip too.

How many trips are full?

6 trips

Drop it

The trip with 2 cars is not full.

How many cars go on the last trip?

2 cars

Remainder

The remainder is the answer.

Estimate first. Then divide. Circle what you did with the remainder.

- 1. 350 students go on a field trip. Each bus holds 32 students. How many buses do they need?**

Estimate: _____

_____ buses

Round up

Drop it

Remainder

- 2. A baker makes 250 muffins. She packs 12 in each box. How many boxes can she fill?**

Estimate: _____

_____ boxes

Round up

Drop it

Remainder

- 3. Mia gives 345 stickers to 16 friends. Each gets the same number. How many are left over?**

Estimate: _____

_____ stickers

Round up

Drop it

Remainder

- 4. 1,000 people come to a school play. Each row has 24 seats. How many rows do they need?**

Estimate: _____

_____ rows

Round up

Drop it

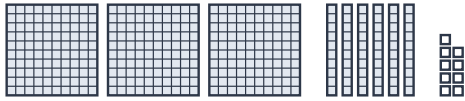
Remainder

Long Division

Divide by sharing equally and with area models.

Share the blocks equally. Trade 1 hundred for 10 tens if you need to.

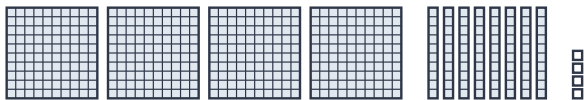
Example $369 \div 3 = \underline{123}$



Each of the 3 groups gets:

Hundreds	Tens	Ones
1	2	3

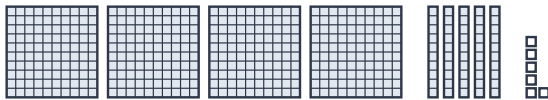
1. $484 \div 4 = \underline{121}$



Each of the 4 groups gets:

Hundreds	Tens	Ones
1	2	1

2. $456 \div 3 = \underline{152}$



Each of the 3 groups gets:

Hundreds	Tens	Ones
1	5	2

Write the missing side of each part. Add the sides.

Example $738 \div 3$

	<u>200</u>	<u>40</u>	<u>6</u>
3	600	120	18

$738 \div 3 = \underline{246}$

3. $856 \div 4$

	<u>200</u>	<u>10</u>	<u>4</u>
4	800	40	16

$856 \div 4 = \underline{214}$

4. $945 \div 5$

	<u>100</u>	<u>80</u>	<u>9</u>
5	500	400	45

$945 \div 5 = \underline{189}$

5. $868 \div 7$

	<u>100</u>	<u>20</u>	<u>4</u>
7	700	140	28

$868 \div 7 = \underline{124}$

Long Division

Divide with partial quotients. Some have a remainder.

Subtract 1,000s, 100s, 10s, then 1s. Add the partial quotients.

Example

$$\begin{array}{r}
 6 \overline{) 1525} \\
 \underline{- 1200} \quad 200 \\
 325 \\
 \underline{- 300} \quad 50 \\
 25 \\
 \underline{- 24} \quad 4 \\
 1 \\
 \underline{} \quad 254
 \end{array}$$

Answer: 254 R 1

1.

$$\begin{array}{r}
 4 \overline{) 2347} \\
 \underline{- 2000} \quad 500 \\
 347 \\
 \underline{- 320} \quad 80 \\
 27 \\
 \underline{- 24} \quad 6 \\
 3 \\
 \underline{} \quad 586
 \end{array}$$

Answer: 586 R 3

2.

$$\begin{array}{r}
 7 \overline{) 3185} \\
 \underline{- 2800} \quad 400 \\
 385 \\
 \underline{- 350} \quad 50 \\
 35 \\
 \underline{- 35} \quad 5 \\
 0 \\
 \underline{} \quad 455
 \end{array}$$

Answer: 455 R 0

3.

$$\begin{array}{r}
 3 \overline{) 4927} \\
 \underline{- 3000} \quad 1,000 \\
 1927 \\
 \underline{- 1800} \quad 600 \\
 127 \\
 \underline{- 120} \quad 40 \\
 7 \\
 \underline{- 6} \quad 2 \\
 1 \\
 \underline{} \quad 1,642
 \end{array}$$

Answer: 1,642 R 1

4.

$$\begin{array}{r}
 8 \overline{) 5018} \\
 \underline{- 4800} \quad 600 \\
 218 \\
 \underline{- 160} \quad 20 \\
 58 \\
 \underline{- 56} \quad 7 \\
 2 \\
 \underline{} \quad 627
 \end{array}$$

Answer: 627 R 2

5.

$$\begin{array}{r}
 9 \overline{) 7345} \\
 \underline{- 7200} \quad 800 \\
 145 \\
 \underline{- 90} \quad 10 \\
 55 \\
 \underline{- 54} \quad 6 \\
 1 \\
 \underline{} \quad 816
 \end{array}$$

Answer: 816 R 1

Long Division

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

Write the remainder after R, then as a fraction over the divisor.

Example

$$\begin{array}{r} 214 \\ 4 \overline{) 857} \\ \underline{- 8} \\ 5 \\ \underline{- 4} \\ 17 \\ \underline{- 16} \\ 1 \end{array}$$

Answer: 214 R 1

or 214 $\frac{1}{4}$

1.

$$\begin{array}{r} 127 \\ 5 \overline{) 638} \\ \underline{- 5} \\ 13 \\ \underline{- 10} \\ 38 \\ \underline{- 35} \\ 3 \end{array}$$

Answer: 127 R 3

or 127 $\frac{3}{5}$

2.

$$\begin{array}{r} 154 \\ 6 \overline{) 929} \\ \underline{- 6} \\ 32 \\ \underline{- 30} \\ 29 \\ \underline{- 24} \\ 5 \end{array}$$

Answer: 154 R 5

or 154 $\frac{5}{6}$

3.

$$\begin{array}{r} 914 \\ 3 \overline{) 2743} \\ \underline{- 27} \\ 4 \\ \underline{- 3} \\ 13 \\ \underline{- 12} \\ 1 \end{array}$$

Answer: 914 R 1

or 914 $\frac{1}{3}$

4.

$$\begin{array}{r} 598 \\ 7 \overline{) 4187} \\ \underline{- 35} \\ 68 \\ \underline{- 63} \\ 57 \\ \underline{- 56} \\ 1 \end{array}$$

Answer: 598 R 1

or 598 $\frac{1}{7}$

5.

$$\begin{array}{r} 693 \\ 9 \overline{) 6239} \\ \underline{- 54} \\ 83 \\ \underline{- 81} \\ 29 \\ \underline{- 27} \\ 2 \end{array}$$

Answer: 693 R 2

or 693 $\frac{2}{9}$

Long Division

Divide by 2-digit numbers.

Use partial quotients. Subtract 100s, 10s, then 1s of the divisor.

Example

$$\begin{array}{r}
 23 \overline{) 1570} \\
 \underline{- 1380} \\
 190 \\
 \underline{- 184} \\
 6
 \end{array}$$

Answer: 68 R 6

1.

$$\begin{array}{r}
 15 \overline{) 2850} \\
 \underline{- 1500} \\
 1350 \\
 \underline{- 1350} \\
 0
 \end{array}$$

Answer: 190 R 0

2.

$$\begin{array}{r}
 18 \overline{) 3746} \\
 \underline{- 3600} \\
 146 \\
 \underline{- 144} \\
 2
 \end{array}$$

Answer: 208 R 2

Estimate each digit

Round the divisor: 23 is close to 20.

$156 \div 20$ is about 7. But $23 \times 7 = 161$, too big, so the digit is 6.

Use the standard algorithm. Estimate each digit first.

Example

$$\begin{array}{r}
 68 \\
 23 \overline{) 1564} \\
 \underline{- 138} 23 \times 6 \\
 184 \\
 \underline{- 184} 23 \times 8 \\
 0
 \end{array}$$

Answer: 68 R 0

3.

$$\begin{array}{r}
 71 \\
 32 \overline{) 2272} \\
 \underline{- 224} 32 \times 7 \\
 32 \\
 \underline{- 32} 32 \times 1 \\
 0
 \end{array}$$

Answer: 71 R 0

4.

$$\begin{array}{r}
 241 \\
 17 \overline{) 4108} \\
 \underline{- 34} 17 \times 2 \\
 70 \\
 \underline{- 68} 17 \times 4 \\
 28 \\
 \underline{- 17} 17 \times 1 \\
 11
 \end{array}$$

Answer: 241 R 11

Long Division

Estimate first. Then divide and decide what the remainder means.

What does the remainder mean? It depends on the question.

Example 50 cars wait for a ferry. It carries 8 cars each trip. $50 \div 8 = 6 \text{ R } 2$

How many trips does the ferry make?

7 trips

Round up

The last 2 cars need a trip too.

How many trips are full?

6 trips

Drop it

The trip with 2 cars is not full.

How many cars go on the last trip?

2 cars

Remainder

The remainder is the answer.

Estimate first. Then divide. Circle what you did with the remainder.

1. 350 students go on a field trip. Each bus holds 32 students. How many buses do they need?

Estimate: $350 \div 35 = 10$

11 buses

Round up

Drop it

Remainder

2. A baker makes 250 muffins. She packs 12 in each box. How many boxes can she fill?

Estimate: $240 \div 12 = 20$

20 boxes

Round up

Drop it

Remainder

3. Mia gives 345 stickers to 16 friends. Each gets the same number. How many are left over?

Estimate: $320 \div 16 = 20$

9 stickers

Round up

Drop it

Remainder

4. 1,000 people come to a school play. Each row has 24 seats. How many rows do they need?

Estimate: $1,000 \div 25 = 40$

42 rows

Round up

Drop it

Remainder