

Grade 4 · Division with Remainders · Worksheet Answer Key

Common Core 4.NBT.B.6, 4.OA.A.3 · mathovore.fr

Every worked solution below shows the division steps, the check with multiplication and addition, and the final answer in bold. Compare each step with your own work, and look for the place where an answer first went wrong.

Grade 4 Common Core: 4.NBT.B.6 · 4.OA.A.3

Problem 1: Groups of 5

Make groups of 5: three full groups use 15 dots, and 2 dots are left. Check:
 $5 \times 3 = 15$, then $15 + 2 = 17$.

Answer: **3 R 2**

Problem 2: Sharing 29 by 6

Count by 6: 6, 12, 18, 24. The next count, 30, is too big. So $6 \times 4 = 24$ and $29 - 24 = 5$. Check:
 $6 \times 4 = 24$, then $24 + 5 = 29$.

Answer: **4 R 5**

Problem 3: Check by multiplying

$8 \times 5 = 40$ and $43 - 40 = 3$. Check: $8 \times 5 = 40$, then $40 + 3 = 43$.

Answer: **5 R 3**

Problem 4: Area model for 72

$60 \div 3 = 20$ and $12 \div 3 = 4$. Add the partial quotients: $20 + 4 = 24$. Check: $3 \times 24 = 72$.

Answer: **24**

Problem 5: Two digits, one left

$4 \times 20 = 80$, and $85 - 80 = 5$. Another group fits: $4 \times 1 = 4$, and $5 - 4 = 1$. The quotient is $20 + 1 = 21$.
Check: $4 \times 21 = 84$, then $84 + 1 = 85$.

	20	1	
4	4×20 $= 80$	4×1 $= 4$	R 1

$85 = 80 + 4 + 1.$

Answer: **21 R 1**

Problem 6: Remainder of 5

$7 \times 10 = 70$, and $96 - 70 = 26$. $7 \times 3 = 21$, and $26 - 21 = 5$. The quotient is $10 + 3 = 13$. Check: $7 \times 13 = 91$, then $91 + 5 = 96$.

Answer: **13 R 5**

Problem 7: Area model for 348

$300 \div 6 = 50$ and $48 \div 6 = 8$. The quotient is $50 + 8 = 58$. Check: $6 \times 58 = 348$.

Answer: **58**

Problem 8: Hundreds place

1. $5 \div 5 = 1$ with $1 \times 5 = 5$; $5 - 5 = 0$. Write 1 in the quotient.
2. Bring down the 2 to make 2.
3. $2 \div 5 = 0$ with $0 \times 5 = 0$; $2 - 0 = 2$. Write 0 in the quotient.
4. Bring down the 7 to make 27.
5. $27 \div 5 = 5$ with $5 \times 5 = 25$; $27 - 25 = 2$. Write 5 in the quotient.
6. No digits are left. The quotient is 105 and the remainder is 2.

Check: $5 \times 105 = 525$, then $525 + 2 = 527$.

$$\begin{array}{r}
 \textcolor{blue}{105} = 105 \text{ R } 2 \\
 5 \overline{) 527} \\
 \underline{\textcolor{brown}{5}} \\
 2 \\
 \underline{\textcolor{brown}{0}} \\
 27 \\
 \underline{\textcolor{brown}{25}} \\
 \textcolor{violet}{2}
 \end{array}$$

$$527 \div 5 = 105 \text{ R } 2.$$

Answer: **105 R 2**

Problem 9: Zero in the quotient

1. $6 \div 3 = 2$ with $2 \times 3 = 6$; $6 - 6 = 0$. Write 2 in the quotient.
2. Bring down the 1 to make 1.
3. $1 \div 3 = 0$ with $0 \times 3 = 0$; $1 - 0 = 1$. Write 0 in the quotient.
4. Bring down the 4 to make 14.
5. $14 \div 3 = 4$ with $4 \times 3 = 12$; $14 - 12 = 2$. Write 4 in the quotient.
6. No digits are left. The quotient is 204 and the remainder is 2.

The 1 left after the first step is less than 3, so the tens place of the quotient is 0. Check: $3 \times 204 = 612$, then $612 + 2 = 614$.

Answer: **204 R 2**

Problem 10: Missing parts

$800 \div 4 = 200$, $160 \div 4 = 40$, and $32 \div 4 = 8$. Add: $200 + 40 + 8 = 248$. Check: $4 \times 248 = 992$.

Answer: **248**

Problem 11: Four-digit, no remainder

1. Since 1 is less than 4, start with the first 2 digits: 12.
2. $12 \div 4 = 3$ with $3 \times 4 = 12$; $12 - 12 = 0$. Write 3 in the quotient.
3. Bring down the 3 to make 3.
4. $3 \div 4 = 0$ with $0 \times 4 = 0$; $3 - 0 = 3$. Write 0 in the quotient.
5. Bring down the 6 to make 36.
6. $36 \div 4 = 9$ with $9 \times 4 = 36$; $36 - 36 = 0$. Write 9 in the quotient.
7. No digits are left. The quotient is 309 with no remainder.

Check: $4 \times 309 = 1,236$.

Answer: **309**

Problem 12: Four digits, remainder 4

1. Since 2 is less than 6, start with the first 2 digits: 24.
2. $24 \div 6 = 4$ with $4 \times 6 = 24$; $24 - 24 = 0$. Write 4 in the quotient.
3. Bring down the 5 to make 5.
4. $5 \div 6 = 0$ with $0 \times 6 = 0$; $5 - 0 = 5$. Write 0 in the quotient.
5. Bring down the 8 to make 58.

6. $58 \div 6 = 9$ with $9 \times 6 = 54$; $58 - 54 = 4$. Write 9 in the quotient.
7. No digits are left. The quotient is 409 and the remainder is 4.

Check: $6 \times 409 = 2,454$, then $2,454 + 4 = 2,458$.

Answer: **409 R 4**

Problem 13: Equal groups of 5

1. Since 3 is less than 5, start with the first 2 digits: 30.
2. $30 \div 5 = 6$ with $6 \times 5 = 30$; $30 - 30 = 0$. Write 6 in the quotient.
3. Bring down the 7 to make 7.
4. $7 \div 5 = 1$ with $1 \times 5 = 5$; $7 - 5 = 2$. Write 1 in the quotient.
5. Bring down the 5 to make 25.
6. $25 \div 5 = 5$ with $5 \times 5 = 25$; $25 - 25 = 0$. Write 5 in the quotient.
7. No digits are left. The quotient is 615 with no remainder.

Check: $5 \times 615 = 3,075$.

Answer: **615**

Problem 14: Dividing by 7

1. Since 5 is less than 7, start with the first 2 digits: 53.
2. $53 \div 7 = 7$ with $7 \times 7 = 49$; $53 - 49 = 4$. Write 7 in the quotient.
3. Bring down the 0 to make 40.
4. $40 \div 7 = 5$ with $5 \times 7 = 35$; $40 - 35 = 5$. Write 5 in the quotient.
5. Bring down the 9 to make 59.
6. $59 \div 7 = 8$ with $8 \times 7 = 56$; $59 - 56 = 3$. Write 8 in the quotient.
7. No digits are left. The quotient is 758 and the remainder is 3.

Check: $7 \times 758 = 5,306$, then $5,306 + 3 = 5,309$.

$$\begin{array}{r}
 \textcolor{blue}{758} = 758 \text{ R } 3 \\
 7 \overline{) 5309} \\
 \underline{49} \\
 40 \\
 \underline{35} \\
 59 \\
 \underline{56} \\
 3
 \end{array}$$

$$5,309 \div 7 = 758 \text{ R } 3.$$

Answer: **758 R 3**

Problem 15: Zeros in the dividend

1. Since 8 is less than 9, start with the first 2 digits: 80.
2. $80 \div 9 = 8$ with $8 \times 9 = 72$; $80 - 72 = 8$. Write 8 in the quotient.
3. Bring down the 0 to make 80.
4. $80 \div 9 = 8$ with $8 \times 9 = 72$; $80 - 72 = 8$. Write 8 in the quotient.
5. Bring down the 0 to make 80.
6. $80 \div 9 = 8$ with $8 \times 9 = 72$; $80 - 72 = 8$. Write 8 in the quotient.
7. No digits are left. The quotient is 888 and the remainder is 8.

Check: $9 \times 888 = 7,992$, then $7,992 + 8 = 8,000$.

Answer: **888 R 8**

Problem 16: Find the mistake

Check his answer: $8 \times 57 = 456$, and $456 + 5 = 461$, which is not 457. The remainder should be $457 - 456 = 1$.

Answer: **57 R 1**; Ethan subtracted incorrectly.

Problem 17: Find the dividend

Multiply the divisor by the quotient: $7 \times 45 = 315$. Add the remainder: $315 + 6 = 321$. Check: $321 \div 7 = 45 \text{ R } 6$.

Answer: **321**

Problem 18: Boxes of cookies

$47 \div 6 = 7 \text{ R } 5$. Only full boxes count, so the remainder is not used for the boxes.

Answer: **7 full boxes with 5 cookies left**

Problem 19: Vans for the field trip

$38 \div 8 = 4 \text{ R } 6$. The 6 extra students still need a ride, so one more van is needed: $4 + 1 = 5$.

Answer: **5 vans**

Problem 20: Sharing stickers

$97 \div 4 = 24 \text{ R } 1$. Check: $4 \times 24 = 96$, then $96 + 1 = 97$.

Answer: **24 stickers each, with 1 left**

Problem 21: Weeks and days

$365 \div 7 = 52 \text{ R } 1$. Check: $7 \times 52 = 364$, then $364 + 1 = 365$. The remainder is the answer to the second question.

Answer: **52 weeks and 1 day**

Problem 22: Beads for bracelets

Step 1: $2,450 \div 8 = 306 \text{ R } 2$. She can finish 306 bracelets and has 2 beads left.

$$\begin{array}{r} 306 \text{ R } 2 \\ 8 \overline{) 2450} \\ \underline{24} \\ 5 \\ \underline{0} \\ 50 \\ \underline{48} \\ 2 \end{array}$$

$$2,450 \div 8 = 306 \text{ R } 2.$$

Step 2: $306 \times 3 = 918$.

Answer: **306 bracelets and \$918**

Problem 23: Apples at the market

Step 1: $1,000 \div 6 = 166 \text{ R } 4$. He fills 166 bags and has 4 apples left. Check: $6 \times 166 = 996$, then $996 + 4 = 1,000$.

Step 2: $166 \times 4 = 664$.

Answer: **166 bags, 4 apples left, and \$664**