

Grade 5 · Dividing Whole Numbers · Worksheet Answer Key

Common Core 5.NBT.B.6 · mathovore.fr

Each solution shows partial quotients and subtraction steps, then a check by multiplication. The final answer is in bold. If your quotient is different, recheck each subtraction and the place value of each partial quotient.

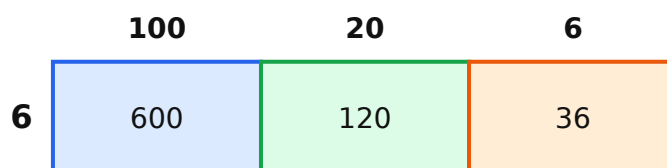
Grade 5 Common Core: 5.NBT.B.6

Problem 1: Area model warm-up

1. $6 \times 100 = 600$, and $756 - 600 = 156$.
2. $6 \times 20 = 120$, and $156 - 120 = 36$.
3. $6 \times 6 = 36$, and $36 - 36 = 0$.

Check: $6 \times 126 = 756$.

126



$$756 \div 6 = 126$$

Filled area model.

Problem 2: Two-digit divisor

1. $15 \times 60 = 900$, and $960 - 900 = 60$.
2. $15 \times 4 = 60$, and $60 - 60 = 0$.

Check: $15 \times 64 = 960$.

64

Problem 3: One-digit divisor

1. $4 \times 300 = 1,200$, and $1,248 - 1,200 = 48$.
2. $4 \times 10 = 40$, and $48 - 40 = 8$.
3. $4 \times 2 = 8$, and $8 - 8 = 0$.

Check: $4 \times 312 = 1,248$.

312

Problem 4: Place-value pattern

4,200 is 420 tens and 60 is 6 tens. $420 \div 6 = 70$.

Check: $60 \times 70 = 4,200$.

70

Problem 5: Exact division

1. $24 \times 30 = 720$, and $744 - 720 = 24$.
2. $24 \times 1 = 24$, and $24 - 24 = 0$.

Check: $24 \times 31 = 744$.

31

Problem 6: A remainder

1. $7 \times 100 = 700$, and $905 - 700 = 205$.
2. $7 \times 20 = 140$, and $205 - 140 = 65$.
3. $7 \times 9 = 63$, and $65 - 63 = 2$.

Check: $7 \times 129 = 903$, and $903 + 2 = 905$.

129 R 2

Problem 7: Four digits, two-digit divisor

1. $35 \times 60 = 2,100$, and $2,415 - 2,100 = 315$.
2. $35 \times 9 = 315$, and $315 - 315 = 0$.

Check: $35 \times 69 = 2,415$.

69

$$\begin{array}{r}
 \text{69} \\
 35 \overline{) 2415} \\
 \underline{- 210} \\
 315 \\
 \underline{- 315} \\
 0
 \end{array}$$

The same work as long division.

Problem 8: Partial quotients

1. $21 \times 70 = 1,470$, and $1,596 - 1,470 = 126$.
2. $21 \times 6 = 126$, and $126 - 126 = 0$.

Check: $21 \times 76 = 1,596$.

76

Problem 9: Divide 3,078 by 18

1. $18 \times 100 = 1,800$, and $3,078 - 1,800 = 1,278$.
2. $18 \times 70 = 1,260$, and $1,278 - 1,260 = 18$.
3. $18 \times 1 = 18$, and $18 - 18 = 0$.

Check: $18 \times 171 = 3,078$.

171

Problem 10: A zero in the quotient

1. $42 \times 100 = 4,200$, and $4,284 - 4,200 = 84$.
2. $42 \times 2 = 84$, and $84 - 84 = 0$.

Check: $42 \times 102 = 4,284$.

102

$$\begin{array}{r}
 \textcolor{green}{102} \\
 \textcolor{brown}{42} \overline{) 4284} \\
 \underline{- 42} \\
 84 \\
 \underline{- 84} \\
 0
 \end{array}$$

The zero in the quotient holds the tens place.

Problem 11: Divide 5,238 by 54

- $54 \times 90 = 4,860$, and $5,238 - 4,860 = 378$.
- $54 \times 7 = 378$, and $378 - 378 = 0$.

Check: $54 \text{ times } 97 = 5,238$.

97

Problem 12: Divide with zeros

- $25 \times 200 = 5,000$, and $6,500 - 5,000 = 1,500$.
- $25 \times 60 = 1,500$, and $1,500 - 1,500 = 0$.

Check: $25 \text{ times } 260 = 6,500$.

260

Problem 13: Estimate with compatible numbers

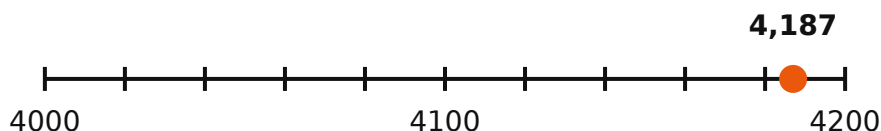
4,187 is close to 4,000 and 52 is close to 50. Estimate: $4,000 \div 50 = 80$.

- $52 \times 80 = 4,160$, and $4,187 - 4,160 = 27$.

Check: $52 \text{ times } 80 = 4,160$, and $4,160 + 27 = 4,187$.

80 R 27

The exact answer is close to the estimate, so it is reasonable.



4,187 is near 4,200 and 4,000; 4,000 is the compatible number used.

Problem 14: A remainder with two digits

1. $31 \times 60 = 1,860$, and $2,009 - 1,860 = 149$.
2. $31 \times 4 = 124$, and $149 - 124 = 25$.

Check: $31 \times 64 = 1,984$, and $1,984 + 25 = 2,009$.

64 R 25

Problem 15: Check with multiplication

Check: $43 \times 183 = 7,869$. That is not 7,863, so Diego is wrong.

1. $43 \times 100 = 4,300$, and $7,863 - 4,300 = 3,563$.
2. $43 \times 80 = 3,440$, and $3,563 - 3,440 = 123$.
3. $43 \times 2 = 86$, and $123 - 86 = 37$.

Check: $43 \times 182 = 7,826$, and $7,826 + 37 = 7,863$.

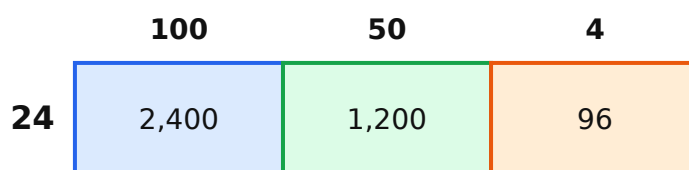
182 R 37

Problem 16: Fill the division area model

1. $24 \times 100 = 2,400$, and $3,696 - 2,400 = 1,296$.
2. $24 \times 50 = 1,200$, and $1,296 - 1,200 = 96$.
3. $24 \times 4 = 96$, and $96 - 96 = 0$.

Check: $24 \times 154 = 3,696$.

154



$$3,696 \div 24 = 154$$

Completed area model.

Problem 17: Find the mistake

Check: $15 \times 21 = 315$, not 3,150. Ana left out a zero: 15 does not go into 31 twice, 3,150 is 315 tens, and $315 \div 15 = 21$ tens.

$15 \times 200 = 3,000$ and $15 \times 10 = 150$, so $3,150 \div 15 = 210$.

Ana dropped the zero (the ones digit); the quotient is 210.

Problem 18: Cookie boxes

1. $12 \times 20 = 240$, and $288 - 240 = 48$.
2. $12 \times 4 = 48$, and $48 - 48 = 0$.

Check: $12 \times 24 = 288$.

24 boxes.

Problem 19: Buses for a field trip

1. $46 \times 20 = 920$, and $1,100 - 920 = 180$.
2. $46 \times 3 = 138$, and $180 - 138 = 42$.

Check: $46 \times 23 = 1,058$, and $1,058 + 42 = 1,100$.

The 42 students left over still need a bus, so one more bus is needed: $23 + 1 = 24$.

24 buses.

Problem 20: Bags of apples

Step 1: bags.

1. $15 \times 100 = 1,500$, and $2,550 - 1,500 = 1,050$.
2. $15 \times 70 = 1,050$, and $1,050 - 1,050 = 0$.

Check: $15 \times 170 = 2,550$.

Step 2: $170 \times 4 = 680$.

\$680.

Problem 21: Road trip speed

1. $21 \times 60 = 1,260$, and $1,365 - 1,260 = 105$.
2. $21 \times 5 = 105$, and $105 - 105 = 0$.

Check: $21 \times 65 = 1,365$.

65 miles per hour.

Problem 22: Baseballs for teams

Step 1: cases.

1. $24 \times 60 = 1,440$, and $1,440 - 1,440 = 0$.

Check: $24 \times 60 = 1,440$.

Step 2: $60 \div 15 = 4$.

4 cases.

Problem 23: Bead bracelets

1. $36 \times 50 = 1,800$, and $1,874 - 1,800 = 74$.

2. $36 \times 2 = 72$, and $74 - 72 = 2$.

Check: $36 \times 52 = 1,872$, and $1,872 + 2 = 1,874$.

52 bracelets with 2 beads left over.