

Grade 5 - Dividing by Two-Digit Divisors - Answer Key

Common Core 5.NBT.B.6 · maths-pdf.fr/en/

This answer key shows partial quotients and checks for all 20 division problems. If your steps are different, that is fine as long as the quotient is right. You can always check by multiplying the quotient by the divisor and adding the remainder.

Grade 5 · Common Core State Standards: **5.NBT.B.6**

Exercise 1 - Basic facts

$$12 \times 8 = 96.$$

Answer: **8**

Exercise 2 - Division fact

$$14 \times 6 = 84.$$

Answer: **6**

Exercise 3 - Multiples of ten

Divide 640 tens by 8 tens: $640 \div 8 = 80$. Check: $80 \times 80 = 6,400$.

Answer: **80**

Exercise 4 - Two digits by two digits

$$21 \times 10 = 210, 252 - 210 = 42, 21 \times 2 = 42.$$

$$10 + 2 = 12.$$

Answer: **12**

Exercise 5 - Partial quotients, 345

$$15 \times 20 = 300, 345 - 300 = 45, 15 \times 3 = 45.$$

$$20 + 3 = 23.$$

Answer: **23**

Exercise 6 - Partial quotients, 972

$$36 \times 20 = 720, 972 - 720 = 252. 36 \times 7 = 252, \text{ so } 252 - 252 = 0.$$

$$20 + 7 = 27.$$

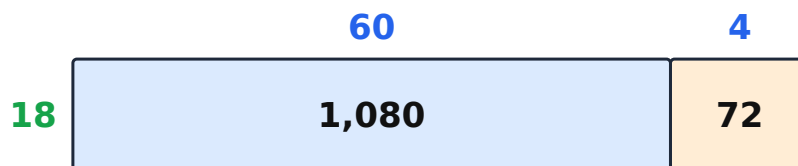
Answer: **27**

Exercise 7 - Area model division

$$1,080 \div 18 = 60 \text{ and } 72 \div 18 = 4.$$

$$\text{Quotient: } 60 + 4 = 64.$$

Answer: **64**



The widths are 60 and 4.

Exercise 8 - Four-digit dividend

$$28 \times 70 = 1,960, 2184 - 1960 = 224. 28 \times 8 = 224.$$

$$70 + 8 = 78.$$

Answer: **78**

$$\begin{array}{r}
 28 \overline{) 2184} \\
 \underline{- 1960} \quad 28 \times 70 \\
 224 \\
 \underline{- 224} \quad 28 \times 8 \\
 0
 \end{array}$$

Quotient: $70 + 8 = 78$

Partial quotients.

Exercise 9 - Larger divisor

$54 \times 80 = 4,320$, $4536 - 4320 = 216$. $54 \times 4 = 216$.

$80 + 4 = 84$.

Answer: **84**

Exercise 10 - Three-digit quotient

$48 \times 100 = 4,800$, $7296 - 4800 = 2496$. $48 \times 50 = 2,400$, $2496 - 2400 = 96$. $48 \times 2 = 96$.

$100 + 50 + 2 = 152$.

Answer: **152**

Exercise 11 - Compatible numbers

Estimate: 29 is about 30, and 2,262 is about 2,400. $2,400 \div 30 = 80$.

Exact: $29 \times 70 = 2,030$, $2262 - 2030 = 232$, $29 \times 8 = 232$. $70 + 8 = 78$.

Answer: estimate **80**, exact **78**

Exercise 12 - A remainder

$22 \times 20 = 440$, $475 - 440 = 35$. $22 \times 1 = 22$, $35 - 22 = 13$.

13 is less than 22, so stop.

Check: $22 \times 21 + 13 = 462 + 13 = 475$.

Answer: **21 R 13**

$$\begin{array}{r} 22 \overline{) 475} \\ - 440 \quad 22 \times 20 \\ \hline 35 \\ - 22 \quad 22 \times 1 \\ \hline 13 \end{array}$$

Quotient: 21 R 13

Division with a remainder.

Exercise 13 - Dividing 1,000

$32 \times 30 = 960$, $1000 - 960 = 40$. $32 \times 1 = 32$, $40 - 32 = 8$.

Check: $32 \times 31 + 8 = 992 + 8 = 1,000$.

Answer: **31 R 8**

Exercise 14 - A bigger remainder

$41 \times 90 = 3,690$, $3805 - 3690 = 115$. $41 \times 2 = 82$, $115 - 82 = 33$.

Check: $41 \times 92 + 33 = 3,772 + 33 = 3,805$.

Answer: **92 R 33**

Exercise 15 - Baseball boxes

$432 \div 24$: $24 \times 10 = 240$, $432 - 240 = 192$, $24 \times 8 = 192$.

$10 + 8 = 18$.

The league fills **18 boxes**.

Exercise 16 - Cupcake trays

$$648 \div 36: 36 \times 10 = 360, 648 - 360 = 288. 36 \times 8 = 288.$$

$$10 + 8 = 18.$$

She needs **18 trays**.

Exercise 17 - Miles per hour

$$1,368 \div 24: 24 \times 50 = 1,200, 1368 - 1200 = 168. 24 \times 7 = 168.$$

$$50 + 7 = 57.$$

They drive **57 miles per hour**.

Exercise 18 - Field trip buses

$$250 \div 48 = 5 \text{ R } 10 \text{ because } 48 \times 5 = 240 \text{ and } 250 - 240 = 10.$$

The 10 students left over still need a ride, so the school needs one more bus.

Answer: **6 buses**

Exercise 19 - Sticker pages

$$35 \times 10 = 350, 500 - 350 = 150. 35 \times 4 = 140, 150 - 140 = 10.$$

$$10 \div 4 = 14 \text{ full pages, remainder } 10.$$

$$\text{Check: } 35 \times 14 + 10 = 490 + 10 = 500.$$

Answer: **14 full pages and 10 stickers left over**

Exercise 20 - Pencils for classes

$$\text{Pencils: } 18 \times 45 = 810 \text{ (} 18 \times 40 = 720 \text{ and } 18 \times 5 = 90 \text{)}.$$

$$\text{Classes: } 810 \div 27: 27 \times 30 = 810.$$

Answer: **30 classes**