

Grade 5 · Operations with Decimals · Worksheet Answer Key

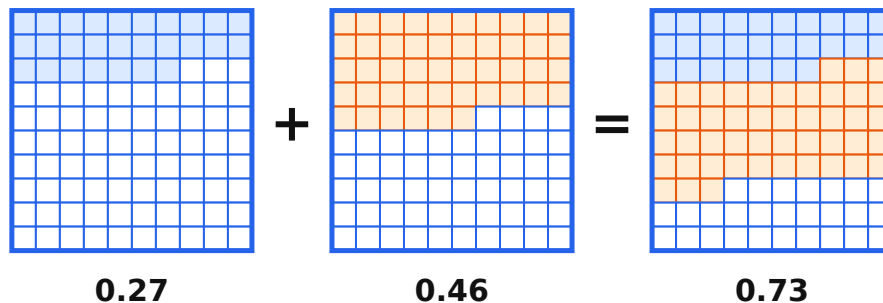
Common Core 5.NBT.B.7 · mathovore.fr

Every problem below has a full worked solution with the final answer in bold. Compare each step with your own work, especially where decimal points are lined up or placed in a product or quotient. Redo any problem where your answer differs.

Grade 5 Common Core: 5.NBT.B.7

Problem 1: Add on a hundredths grid

Count the shaded squares: $27 + 46 = 73$ hundredths. $0.27 + 0.46 = 0.73$.



$27 + 46 = 73$ squares.

Answer: 0.73

Problem 2: Add tenths and hundredths

- a. Line up the decimal points and add place by place: $0.6 + 0.7 = 1.3$ **1.3**
- b. Line up the decimal points and add place by place: $0.45 + 0.38 = 0.83$ **0.83**
- c. Line up the decimal points and add place by place: $1.25 + 0.9 = 2.15$ **2.15**
- d. Line up the decimal points and add place by place: $3.07 + 2.68 = 5.75$ **5.75**

Problem 3: Line up and add

- a. Line up the decimal points and add place by place: $12.5 + 3.75 = 16.25$ **16.25**
- b. Line up the decimal points and add place by place: $8.06 + 14.9 = 22.96$ **22.96**
- c. Line up the decimal points and add place by place: $25 + 4.38 = 29.38$ **29.38**
- d. Line up the decimal points and add place by place: $19.99 + 0.01 = 20$ **20**

Problem 4: Subtract tenths and hundredths

- a. Line up the decimal points and subtract place by place: $0.9 - 0.4 = 0.5$ **0.5**
- b. Line up the decimal points and subtract place by place: $1 - 0.37 = 0.63$ **0.63**
- c. Line up the decimal points and subtract place by place: $0.82 - 0.57 = 0.25$ **0.25**
- d. Line up the decimal points and subtract place by place: $2.4 - 0.65 = 1.75$ **1.75**

Problem 5: Line up and subtract

- a. Line up the decimal points and subtract place by place: $15.3 - 6.75 = 8.55$ **8.55**
- b. Line up the decimal points and subtract place by place: $40 - 12.86 = 27.14$ **27.14**
- c. Line up the decimal points and subtract place by place: $9.05 - 3.9 = 5.15$ **5.15**
- d. Line up the decimal points and subtract place by place: $20.5 - 8.37 = 12.13$ **12.13**

Problem 6: Subtract with jumps

The jumps are 0.25 and 1. Add them: $0.25 + 1 = 1.25$. So $4 - 2.75 = 1.25$. Check: $2.75 + 1.25 = 4$.

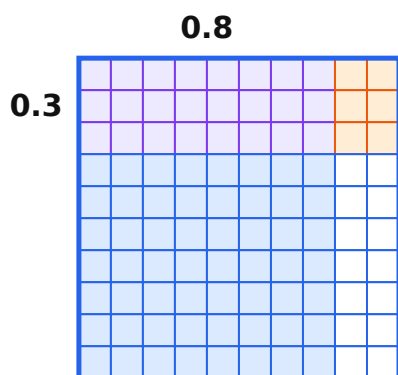
Answer: 1.25

Problem 7: Find the missing number

- a. Subtract the known addend: $7.15 - 3.4 = 3.75$. **3.75**
- b. Subtract the known addend: $9.04 - 5.2 = 3.84$. **3.84**
- c. Add the amount that was taken away: $4.45 + 2.6 = 7.05$. **7.05**
- d. Subtract the difference from the starting number: $12 - 5.35 = 6.65$. **6.65**

Problem 8: Multiply on a grid

The orange rows and blue columns overlap in $3 \times 8 = 24$ squares. Each square is one hundredth. $0.3 \times 0.8 = 0.24$.



24 of 100 squares overlap.

$$\begin{aligned} & \mathbf{0.3 \times 0.8} \\ &= 24 \text{ hundredth:} \\ &= \mathbf{0.24} \end{aligned}$$

Answer: 0.24

Problem 9: Multiply by a whole number

- a. Multiply as whole numbers: $3 \times 4 = 12$. The factors have $1 + 0 = 1$ decimal places, so the product does too: $0.3 \times 4 = 1.2$ **1.2**
- b. Multiply as whole numbers: $25 \times 6 = 150$. The factors have $2 + 0 = 2$ decimal places, so the product does too: $0.25 \times 6 = 1.5$ **1.5**
- c. Multiply as whole numbers: $14 \times 5 = 70$. The factors have $1 + 0 = 1$ decimal places, so the product does too: $1.4 \times 5 = 7$ **7**
- d. Multiply as whole numbers: $235 \times 4 = 940$. The factors have $2 + 0 = 2$ decimal places, so the product does too: $2.35 \times 4 = 9.4$ **9.4**

Problem 10: Multiply decimals

- a. Multiply as whole numbers: $5 \times 6 = 30$. The factors have $1 + 1 = 2$ decimal places, so the product does too: $0.5 \times 0.6 = 0.3$ **0.3**
- b. Multiply as whole numbers: $12 \times 3 = 36$. The factors have $1 + 1 = 2$ decimal places, so the product does too: $1.2 \times 0.3 = 0.36$ **0.36**
- c. Multiply as whole numbers: $9 \times 9 = 81$. The factors have $1 + 1 = 2$ decimal places, so the product does too: $0.9 \times 0.9 = 0.81$ **0.81**
- d. Multiply as whole numbers: $46 \times 5 = 230$. The factors have $1 + 1 = 2$ decimal places, so the product does too: $4.6 \times 0.5 = 2.3$ **2.3**

Problem 11: Place the decimal point

- a. $2.5 \times 1.6 = 4$: the factors have $1 + 1 = 2$ decimal places, so 400 becomes 4. **4**
- b. $0.25 \times 16 = 4$: the factors have $2 + 0 = 2$ decimal places, so 400 becomes 4. **4**
- c. $2.5 \times 0.16 = 0.4$: the factors have $1 + 2 = 3$ decimal places, so 400 becomes 0.4. **0.4**

Problem 12: Estimate, then multiply

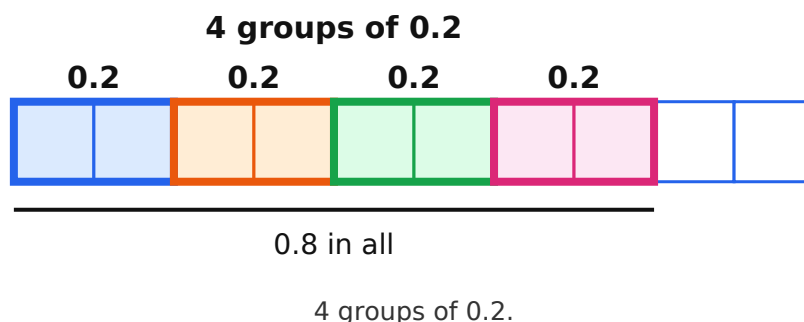
- a. Estimate: $5 \times 3 = 15$. Exact: $49 \times 31 = 1519$, two decimal places, so $4.9 \times 3.1 = 15.19$. **15.19**
- b. Estimate: $6 \times 3 = 18$. Exact: $61 \times 29 = 1769$, two decimal places, so $6.1 \times 2.9 = 17.69$. **17.69**

Problem 13: Divide by a whole number

- a. Divide as with whole numbers and keep the decimal point in place: $4.8 \div 4 = 1.2$ **1.2**
- b. Divide as with whole numbers and keep the decimal point in place: $0.96 \div 8 = 0.12$ **0.12**
- c. Divide as with whole numbers and keep the decimal point in place: $7.5 \div 5 = 1.5$ **1.5**
- d. Divide as with whole numbers and keep the decimal point in place: $13.2 \div 6 = 2.2$ **2.2**

Problem 14: Divide with strips

Eight tenths make 4 groups of two tenths. $0.8 \div 0.2 = 4$. Check: $4 \times 0.2 = 0.8$.



Answer: 4

Problem 15: Divide by a decimal

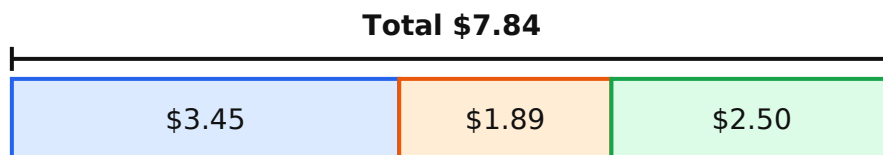
- a. Multiply both numbers by 10 so the divisor is a whole number: $36 \div 9 = 4$. So $3.6 \div 0.9 = 4$ **4**
- b. Multiply both numbers by 10 so the divisor is a whole number: $45 \div 5 = 9$. So $4.5 \div 0.5 = 9$ **9**
- c. Multiply both numbers by 100 so the divisor is a whole number: $720 \div 6 = 120$. So $7.2 \div 0.06 = 120$ **120**
- d. Multiply both numbers by 100 so the divisor is a whole number: $84 \div 12 = 7$. So $0.84 \div 0.12 = 7$ **7**

Problem 16: Divide to hundredths

- a. Divide as with whole numbers and keep the decimal point in place: $9 \div 4 = 2.25$ **2.25**
- b. Divide as with whole numbers and keep the decimal point in place: $5.1 \div 6 = 0.85$ **0.85**
- c. Multiply both numbers by 10 so the divisor is a whole number: $126 \div 4 = 31.5$. So $12.6 \div 0.4 = 31.5$ **31.5**
- d. Multiply both numbers by 10 so the divisor is a whole number: $147 \div 7 = 21$. So $14.7 \div 0.7 = 21$ **21**

Problem 17: Back-to-school supplies

- a. $\$3.45 + \$1.89 + \$2.50 = \$7.84$. **\$7.84**
- b. $\$10.00 - \$7.84 = \$2.16$. **\$2.16**



Three prices make \$7.84.

Problem 18: Training miles

- a. $2.4 + 3.15 + 1.85 = 7.4$. **7.4 miles**
b. $10 - 7.4 = 2.6$. **2.6 miles**

Problem 19: Farmers market

Apples: $3.5 \times \$1.80 = \$6.30$. Grapes: $2.25 \times \$2.40 = \$5.40$. Total: $\$6.30 + \$5.40 = \$11.70$.

Answer: **\$11.70**

Problem 20: Ribbon pieces

Multiply both numbers by 100: $1875 \div 75 = 25$. Check: $25 \times 0.75 = 18.75$.

Answer: **25 pieces**

Problem 21: Birthday money

Spent: $\$18.75 + \$12.40 = \$31.15$. Left: $\$50.00 - \$31.15 = \$18.85$.



The missing part is \$18.85.

Answer: **\$18.85**

Problem 22: Gas prices

- a. $41.58 \div 12.6$: multiply both by 10 to get $415.8 \div 126$, or check that $12.6 \times 3.3 = 41.58$. **\$3.30 per gallon**
b. $8.5 \times \$3.30 = \$28.05$. **\$28.05**

Problem 23: Relay team

Total: $25.8 + 26.45 + 24.9 + 27.15 = 104.3$ seconds. Difference: $104.3 - 100 = 4.3$.

Answer: **4.3 seconds over the goal**