

Grade 6 · Adding, Subtracting, Multiplying and Dividing Decimals · Test Answer Key

Common Core 6.NS.B.3 · mathovore.fr

This answer key shows the full solution for each test question and explains how the 20 points are awarded. Partial credit is given when the digits are correct but the decimal point is misplaced.

Grade 6 Common Core: 6.NS.B.3

Question 1: Add and subtract decimals (2 points)

a) $18.60 + 7.95 = 26.55$.

b) $40.000 - 16.375 = 23.625$. Check: $23.625 + 16.375 = 40$.

a) 26.55 b) 23.625

Scoring: 1 point for each correct value.

$$\begin{array}{r} 18.60 \\ + 7.95 \\ \hline 26.55 \end{array}$$

$18.6 + 7.95 = 26.55$

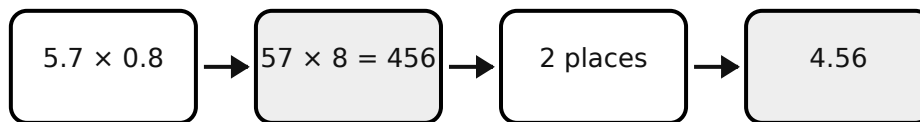
Question 2: Multiply decimals (2 points)

a) $57 \times 8 = 456$. The factors have 2 decimal places in all, so the product is 4.56.

b) $124 \times 35 = 4,340$. The factors have 2 decimal places in all, so the product is $43.40 = 43.4$.

a) 4.56 b) 43.4

Scoring: 1 point for each correct product.



Part a: count the decimal places.

Question 3: Divide decimals (2 points)

a) $918 \div 6 = 153$, so $9.18 \div 6 = 1.53$.

b) Multiply both numbers by 100: $504 \div 28 = 18$. Check: $0.28 \times 18 = 5.04$.

a) 1.53 b) 18

Scoring: 1 point for each correct quotient.

Question 4: Find the error (2 points)

Aisha multiplied $32 \times 5 = 160$ and then misplaced the decimal point. The factors have $1+1=2$ decimal places, so the product needs 2 places: $1.60 = 1.6$. A quick estimate also shows the error: 3 times one-half is about 1.5, not 16.

The correct product is 1.6.

Scoring: 1 point for explaining the decimal-place error; 1 point for 1.6.

Question 5: Grocery bill (3 points)

a) $24 \times 185 = 4,440$, with 3 decimal places: 4.440. Apples cost **\\$4.44**.

b) $75 \times 640 = 48,000$, with 4 decimal places: 4.8000. Cheese costs **\\$4.80**.

c) Total $\$4.44 + \$4.80 = \$9.24$. Change $\$10.00 - \$9.24 = \mathbf{\$0.76}$.

Scoring: 1 point for each part.

Question 6: Fence boards (2 points)

Divide $36.75 \div 0.75$. Multiply both by 100: $3,675 \div 75 = 49$. Check: $0.75 \times 49 = 36.75$.

49 boards

Scoring: 1 point for a correct setup (dividing 36.75 by 0.75); 1 point for 49.

Question 7: Rainfall totals (3 points)

a) $0.450 + 1.200 = 1.650$. Then $1.650 + 0.075 = 1.725$. Total **1.725 inches**.

b) $3.000 - 1.725 = \mathbf{1.275 \text{ inches}}$.

Scoring: part a, 1 point for aligning decimal points and 1 point for the total; 1 point for part b.

Question 8: Buying gas (2 points)

$115 \times 348 = 40,020$. The factors have $1 + 2 = 3$ decimal places, so the product is 40.020. Estimate:
 $11.5 \times 3.5 \approx 40$.

\\$40.02

Scoring: 1 point for the correct digits (40,020); 1 point for correct decimal placement and dollars-and-cents form.

Question 9: Punch servings (2 points)

$12.6 \div 0.75 = 1,260 \div 75 = 16.8$, so 16 full servings. Juice used: $16 \times 0.75 = 12$ cups. Left over:
 $12.6 - 12 = 0.6$ cup.

16 full servings with 0.6 cup left over.

Scoring: 1 point for 16 servings; 1 point for 0.6 cup left over.

Total
20 points