

Decimal Operations: Add, Subtract, Multiply, Divide

Grade 6 math · Test Answer Key · Standards: 6.NS.B.3

Each solution shows the expected steps and a scoring guide. Give partial credit when the method is right but a misplaced decimal point or small slip changes the final number.

Standards: 6.NS.B.3 · **Level:** Grade 6

Question 1 Add and Subtract (2 points)

- a. **26.05**
- b. **17.62**

Scoring: 1 point for each part.

Question 2 Multiply (2 points)

- a. $58 \times 4 = 232$, two places: **2.32**.
- b. $36 \times 15 = 540$, four places: **0.054**.

Scoring: 1 point for each part.

Question 3 Divide (2 points)

- a. **2.4**
- b. $54 \div 9 = \mathbf{6}$.

Scoring: 1 point for each part.

Question 4 Find the Error (2 points)

The digits were lined up on the right instead of by the decimal points, so 7 tenths was added to the hundredths place. With points aligned, $12.45 + 3.70 = 16.15$.

16.15

$$\begin{array}{r}
 12.45 \\
 + \quad 3.70 \\
 \hline
 16.15
 \end{array}$$

Decimal points aligned.

Scoring: 1 point for the explanation; 1 point for the correct sum.

Question 5 Estimate and Multiply (2 points)

- a. $25 \times 3 = \text{about } 75$.
- b. $248 \times 31 = 7,688$, two places: **76.88**.

Scoring: 1 point for each part.

Question 6 Butter for Cookies (3 points)

- a. $8.4 \div 0.35 = 840 \div 35 = \text{24 batches}$.
- b. $20 \times 0.35 = 7$, and $8.4 - 7 = \text{1.4 pounds}$.

Scoring: 2 points for (a) (1 point for a correct setup); 1 point for (b).

Question 7 Store Receipt (3 points)

- a. $5.55 + 1.90 + 2.40 = \text{\$9.85}$.
- b. $20 - 9.85 = \text{\$10.15}$.

Scoring: 2 points for (a); 1 point for (b).

Question 8 Bike Shop Profit (3 points)

Cost: $25 \times 14.80 = 370$. Sales: $25 \times 21.95 = 548.75$.

Profit: $548.75 - 370 = \text{\$178.75}$.

Scoring: 1 point for the cost, 1 point for the sales, 1 point for the profit.

Question 9 Place the Point (1 point)

Two decimal places in total: **19.76**.

Scoring: 1 point for the correct product.