PreAlgebra
Skill-Builder #D–7
Multiplying Decimals by Powers of 10

When multiplying a decimal by $10^n$, we must move the decimal point $n$ places to the right of its current location. Use zeros to fill in any missing places. Note that $n$ coincides with the number of zeros in the power of 10.

Reminders: 1) The sign of the number remains the same.
2) If the number is a whole number, the decimal point is after the place value of ones, but before the place value of tenths.

Example 1:

Multiply: $-67.235 \times 100,000$

move the decimal point 5 places to the right of its current location

$100,000 = 10^5$ (since there are 5 zeros)

Answer: $-6,723,500$

Example 2:

Multiply: $5.00023 \times 100$

move the decimal point 2 places to the right of its current location

$100 = 10^2$ (since there are 2 zeros)

Answer: $500.023$

Example 3:

Multiply: $-43,346 \times 10,000$

move the decimal point (after the ones digit) 4 places to the right

$10,000 = 10^4$ (since there are 4 zeros)

Answer: $-433,460,000$
1. Multiply: $-56.7 \times 1000$

2. Multiply: $2586.127 \times 10$

3. Multiply: $-452.317 \times 10000$

4. Multiply: $0.000256 \times 100$
PreAlgebra
Skill-Builder #D–7
Multiplying Decimals by Powers of 10

Answers

1. $-56,700$

2. $25,861.27$

3. $-4,523,170$

4. $0.0256$

Prepared by Susan Vo, Summer 2010