

Lesson 10: The Distributive Property and the Products of Decimals

Decimals

Classwork

Opening Exercise

Calculate the product.

a. 200×32.6

$$\begin{array}{r} 32.6 \\ 200 \\ \hline 6,520 \end{array}$$

b. 500×22.12

$$\begin{array}{r} 22.12 \\ \times 500 \\ \hline 11,060 \end{array}$$

Example 1: Introduction to Partial Products

Use partial products and the distributive property to calculate the product.

$$200 \times 32.6$$

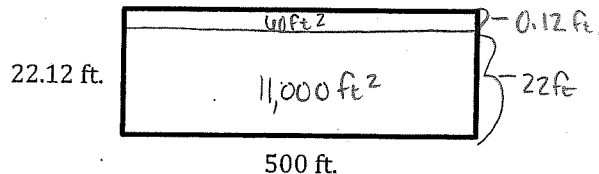
$$\begin{array}{l} 200(32) + 200(0.6) \\ \downarrow \quad \quad \downarrow \\ 6,400 + 120 = 6,520 \end{array}$$

OR

$$200 \times (32 + 0.6)$$

Example 2: Introduction to Partial Products

Use partial products and the distributive property to calculate the area of the rectangular patio shown below.



$$\begin{aligned} 500 \times 22.12 &= 500(22 + 0.12) = 500(22) + 500(0.12) \\ &= 11,000 + 60 = 11,060 \end{aligned}$$

The area of the patio would be 11,060 square feet.

Exercises

Use the boxes below to show your work for each station. Make sure that you are putting the solution for each station in the correct box.

Station One:

$$300 \times 25.4$$

$$300(25) + 300(0.4)$$

$$7,500 + 120 = 7,620$$

Station Two:

$$45.9 \times 100$$

$$100(45) + 100(0.9)$$

$$4,500 + 90 = 4,590$$

Station Three:

$$800 \times 12.3$$

$$800(12) + 800(0.3)$$

$$9,600 + 240 = 9,840$$

Station Four:

$$400 \times 21.8$$

$$400(21) + 400(0.8)$$

$$8,400 + 320 = 8,720$$

Station Five:

$$32.6 \times 200$$

$$200(32) + 200(0.6)$$

$$6,400 + 120 = 6,520$$

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