Multiplying a Decimal by a Whole Number

Travis can read a book chapter in 2.6 hours. The book has 18 chapters. How long will it take Travis to read the book?

Step 1. Use powers of 10 to multiply as you would with whole numbers.

$2.6 \times 10^1 = 26$
$18 \times 1 = 18$

$$\begin{array}{r} 26 \\ \times\ 18 \\ \hline 208 \\ +\ 260 \\ \hline 468 \end{array}$$

Step 2. Divide the whole number answer by 10^1 so that the number of decimal places in the factors and the product does not change.

$468 \div 10^1 = 46.8$

Step 3. Use reasoning to check your answer. Since 2.6 is greater than one, the answer should be greater than 18. Because 46.8 is greater than 18, your answer is reasonable.

It will take Travis 46.8 hours to read the book.

For questions **1** through **3**, find the product.

1. $\begin{array}{r} 2.3 \\ \times\ \ 6 \\ \hline \end{array}$

2. $\begin{array}{r} 71.7 \\ \times\ \ 12 \\ \hline \end{array}$

3. $\begin{array}{r} 0.89 \\ \times\ \ 21 \\ \hline \end{array}$

4. Sara is making pillows. Each pillow requires 1.7 yards of fabric. How many yards of fabric will Sara need to make 9 pillows?

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5. Light bulbs usually cost $2. They are on sale for 0.50 of the regular price. What is the sale price? Is this a better price than if the sale price were 0.35 of the regular price?

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