

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.

$$\begin{array}{r} 2.6 \times 10^1 = 26 \quad 26 \\ 18 \times 1 = 18 \quad \times 18 \\ \hline 208 \\ + 260 \\ \hline 468 \end{array}$$

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?

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?

Name _____

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Find each product.

1.
$$\begin{array}{r} 5.4 \\ \times 3 \\ \hline \end{array}$$

2.
$$\begin{array}{r} 3.8 \\ \times 4 \\ \hline \end{array}$$

3.
$$\begin{array}{r} 0.55 \\ \times 8 \\ \hline \end{array}$$

4.
$$\begin{array}{r} 8.19 \\ \times 5 \\ \hline \end{array}$$

Insert a decimal point in each answer to make the equation true.

5. $5 \times 6.3 = 315$ _____

6. $3.01 \times 9 = 2709$ _____

Use the table at the right for Exercises 7–9.

7. Which desert accumulates the least amount of rain in August?

8. If each month in Reno had the same average rainfall as in August, what would the total number of millimeters be after 12 months?

Average Desert Rainfall in August

Desert	Average Rainfall
Reno	0.19 mm
Sahara	0.17 mm
Mojave	0.1 mm
Tempe	0.24 mm

9. In December, the average total rainfall in all of the deserts together is 0.89 mm. Explain how to use the figures from the table to write a comparison of the total desert rainfall in August and December.

10. If $4n = 3.60$, which is the value of n ?

A 0.09

B 0.9

C 9

D 90