Guided Practice

Check

Multiply. (Examples 1–5)

1. $2.7 \times 6 =$ 16.2

Show your work.

2. $0.52 \times 3 =$ 1.56

3. $5 \times 0.09 =$ 0.45

4. $4 \times 0.027 =$ 0.108

5. $0.071 \times 8 =$ 0.568

6. $0.065 \times 18 =$ 1.17

$$\begin{array}{r} 5\overset{6}{.}065 \\ \times\ 18 \\ \hline 520 \\ 650 \\ \hline 1170 \end{array}$$

7. A bee hummingbird has a mass of 1.8 grams. How many grams are 6 hummingbirds and a 4-gram nest? (Example 6)

14.8 g

529
650
1179

7. A bee hummingbird has a mass of 1.8 grams. How many grams are 6 hummingbirds and a 4-gram nest? (Example 6)

14.8 g

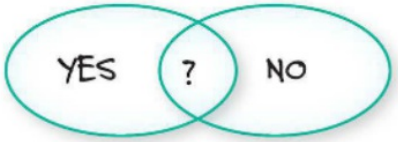
8. Justin buys 12 pencils for $0.56 each. He pays with a $10 bill. How much change will he receive? (Example 6)

$3.28

9. **Building on the Essential Question** How can estimating products help you to place the decimal correctly? **Sample answer: The estimate can help you determine the greatest place value. You can check for reasonableness by using estimation.**

Rate Yourself!

Are you ready to move on? Shade the section that applies.



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Tutor

Name _____ My Homework _____

Independent Practice

eHelp Go online for Step-by-Step Solutions

Multiply. (Examples 1–5)

1. $1.2 \times 7 =$ 8.4

Show your work.

2. $0.7 \times 9 =$ 6.3

3. $2 \times 1.3 =$ 2.6

4. $0.8 \times 9 =$ 7.2

5. $3 \times 0.02 =$ 0.06

6. $0.0036 \times 19 =$ 0.0684

7 The table shows the number of gallons of gasoline the Beckleys purchased on their road trip. What was the total cost for gas for the trip? (Example 6)

$215.27

Fuel	
Number of Gallons	**Cost per Gallon ($)**
12	4.89
17	4.72
15	5.09

8. Sharon buys 14 folders for $0.75 each. How much change will she receive if she pays with $15? (Example 6) **$4.50**

9 **STEM** The hottest temperature recorded in the world, in degrees Fahrenheit, can be found by multiplying 13.46 by 10. Find this temperature.

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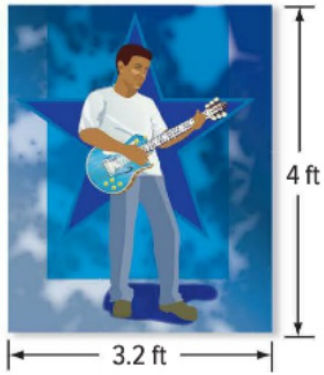
Justify your procedure. **134.6°F;**

Sample answer: 1,346 × 10 = 13,460. Since 13.46 has 2 decimal places, 13.46 × 10 = 134.60.

10. MP **Justify Conclusions** Asher recently bought the poster shown at the right. What is its area? Explain your reasoning to a classmate.

(*Hint:* Use area = length × width.) **12.8 ft^2; The length is 3.2 feet and the width is 4 feet. Since 3.2 × 4 = 12.8 and feet × feet = square feet, the area is 12.8 square feet.**



11. **Use Math Tools** The thickness of each type of coin is shown in the table. How much thicker is a stack of a dollar's worth of nickels than a dollar's worth of quarters? Explain your answer.

Sample answer: 32 mm; 20 × 1.95 = 39; 4 × 1.75 = 7; 39 − 7 = 32

Coin	Thickness (mm)
penny	1.55
nickel	1.95
dime	1.35
quarter	1.75

H.O.T. Problems Higher Order Thinking

12. **Model with Mathematics** Write a real-world problem involving multiplication by a decimal factor. Then solve the problem.

Sample answer: I bought three ice cream cones for $1.59 each. How much money did I spend? 3 × 1.59 = $4.77.

13. **Persevere with Problems** Discuss two different ways to find the value of the expression 5.4 × 1.17 × 100 that do not require you to first multiply 5.4 × 1.17.

Sample answer: First evaluate 1.17 × 1

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Standards Search...

Glossary Index Answers: On Off 100%

13. **Persevere with Problems** Discuss two different ways to find the value of the expression $5.4 \times 1.17 \times 100$ that do not require you to first multiply 5.4×1.17.

Sample answer: First evaluate 1.17×100 to be 117. Then, multiply 117 by 5.4 to get the answer of 631.8. Or first evaluate 5.4×100 to be 540. Then multiply 540 by 1.17 to get the answer of 631.8. Or first evaluate 5.4×10 to be 54 and 1.17×10 to be 11.7. Then multiply 54 by 11.7 to get the answer of 631.8.

14. **Reason Inductively** Use the product of 123×47 to find the product of 123×0.47. Explain the difference in the two products.

The product of 123×47 is 5,781. The product of 123×0.47 is 57.81, which is one-hundredth the size of the whole number product. The second factor is one-hundredth the size of the whole number factor.

15. **Construct an Argument** Your friend thinks that $1.5 \times 8 = 1.20$ because you do not count the zero when placing the decimal point. Is your friend correct? Justify your reasoning.

No; zero represents the number of hundredths and should be counted.

16. **Construct an Argument** Explain how you can mentally determine whether 125×0.9 is less than, greater than, or equal to 125.

Sample answer: Since 0.9 is less than 1, you know that the product 125×0.9 would be less than 125×1 or 125.

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