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5.NBT.A.2 Multiplication Patterns in Multiplying Decimals

5.NBT.A.2: Explain patterns in zeros of the product and in the placement of the decimal point.

1. Use facts and multiplication patterns to complete the multiplication sentences.

Example 1.2 × 3 = 3.6 (fact) 1.2 × 30 = 36 1.2 × 300 = 360 1.2 × 3,000 = 3,600	0.5 × 7 = 0.5 × 70 = 0.5 × 700 = 0.5 × 7,000 =	0.6 × 8 = 0.6 × 80 = 0.6 × 800 = 0.6 × 8,000 =	0.04 × 9 = 0.04 × 90 = 0.04 × 900 = 0.04 × 9,000 =
0.072 × 1 = 0.072 × 10 = 0.072 × 100 = 0.072 × 1,000 =	11.32 × 1 = 11.32 × 10 = 11.32 × 100 = 11.32 × 1,000 =	7 × 1.5 = 70 × 1.5 = 700 × 1.5 = 70,000 × 1.5 =	0.3 × 1.2 = 0.3 × 12 = 0.3 × 1,200 = 0.03 × 12,000 =

2. Use facts and multiplication patterns to find the product.

   a. 80 × 0.003
   b. 0.03 × 1,500
   c. 500 × 0.04
   d. 0.003 × 9,000
   e. 0.22 × 100
   f. 0.09 × 5,000
   g. 1.10 × 7,000
   h. 0.07 × 2,500
   i. 0.08 × 60,000
   j. 0.0003 × 1.4

Answers:
a.
b.
c.
d.
e.
f.
g.
h.
i.
j.

3. 1 kilogram is approximately 2.2 pounds. How many pounds are 10 kilograms?

Answer:

4. A truck is carrying 4,000 pieces of canned goods. If one can weighs 0.55 pounds, how much weight of canned goods does the truck carry?

Answer:

5. A glass of milk contains 1.2 grams of calcium. Lovie drinks 0.3 glass of milk after breakfast and another 0.7 glass of milk after dinner. About how much calcium does she get from milk in 200 days?

Answer:

6. A bus travels about 12.53 miles in a gallon of gasoline. About how many miles can it travel with 1,000 gallons of gasoline?

   A. 1,253 mi B. 12,530 mi C. 125,300 mi D. 125.3 mi

Answer:

7. 8,000 × ***h*** = 8. What is the value of ***h***?

   A. 1 B. 10 C. 0.01 D. 0.001

Answer:

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Answer Key

5.NBT.A.2: Explain patterns in zeros of the product and in the placement of the decimal point.

1. Use facts and multiplication patterns to complete the multiplication sentences.

Example 1.2 × 3 = 3.6 (fact) 1.2 × 30 = 36 1.2 × 300 = 360 1.2 × 3,000 = 3,600	0.5 × 7 = 3.5 0.5 × 70 = 35 0.5 × 700 = 350 0.5 × 7,000 = 3,500	0.6 × 8 = 4.8 0.6 × 80 = 48 0.6 × 800 = 480 0.6 × 8,000 = 4,800	0.04 × 9 = 0.36 0.04 × 90 = 3.6 0.04 × 900 = 36 0.04 × 9,000 = 360
0.072 × 1 = 0.072 0.072 × 10 = 0.72 0.072 × 100 = 7.2 0.072 × 1,000 = 72	11.32 × 1 = 11.32 11.32 × 10 = 113.2 11.32 × 100 = 1,132 11.32 × 1,000 = 11,320	7 × 1.5 = 10.5 70 × 1.5 = 105 700 × 1.5 = 1,050 70,000 × 1.5 = 105,000	0.3 × 1.2 = 0.36 0.3 × 12 = 3.6 0.3 × 1,200 = 360 0.03 × 12,000 = 360

2. Use facts and multiplication patterns to find the product

   a. 80 × 0.003
   b. 0.03 × 1,500
   c. 500 × 0.04
   d. 0.003 × 9,000
   e. 0.22 × 100
   f. 0.09 × 5,000
   g. 1.10 × 7,000
   h. 0.07 × 2,500
   i. 0.08 × 60,000
   j. 0.0003 × 1.4

Answers:
a. 0.24
b. 45
c. 20
d. 27
e. 22
f. 450
g. 7,700
h. 175
i. 4,800
j. 0.00042

3. 1 kilogram is approximately 2.2 pounds. How many pounds are 10 kilograms?

Answer:
22 pounds

4. A truck is carrying 4,000 pieces of canned goods. If one can weighs 0.55 pounds, how much weight of canned goods does the truck carry?

Answer:
2,200 pounds

5. A glass of milk contains 1.2 grams of calcium. Lovie drinks 0.3 glass of milk after breakfast and another 0.7 glass of milk after dinner. About how much calcium does she get from milk in 200 days?

Answer:
240 grams

6. A bus travels about 12.53 miles in a gallon of gasoline. About how many miles can it travel with 1,000 gallons of gasoline?

   A. 1,253 mi B. 12,530 mi C. 125,300 mi D. 125.3 mi

Answer:
B. 12.530 mi

7. 8,000 × ***h*** = 8. What is the value of ***h***?

   A. 1 B. 10 C. 0.01 D. 0.001

Answer:
D. 0.001