Base 10

Multiplication
and
Division

(4th through 6th Grades)

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Introduction and Pedagogical Recommendations

This short mathematics unit is on Base 10 multiplication and division. The enclosed student practice sheets are designed to be implemented efficiently and effectively each day – via a warm-up or spaced repetition pedagogical technique. This resource is a self-defined "off the shelf" curricular resource, whereas a classroom teacher can implement the content as well as the student practice sheet in subsequent days with little to no preparation time. There is a threshold number of student practice page versions for each multiplication and division of Base 10 application to ensure that students exceed the number of repetitions required to achieve long-term mastery of the content.

It is important to note that the curricular resource sheets can be efficiently implemented everyday regardless of the core lesson content designed for that school day. A teacher can provide a 5-minute spaced repetition or warm-up session using the enclosed resources before the onset of the core lesson. The student practice pages are divided into halves, so a teacher has the option to use the resource for a quick warm-up, transition activity, or a homework assignment and extend the number of days of daily practice with their students.

Section 1 covers the **<u>multiplication</u>** of Base 10 decimals, fractions, and whole numbers.

Section 2 covers the **<u>division</u>** of Base 10 decimals, fractions, and whole numbers.

Section 3 mixes **<u>multiplication and division</u>** of Base 10 decimals, fractions and whole numbers.

There are not prerequisite skills that a student must learn to immediately gain an understanding of this content other than basic Base 10 place value thinking. These concepts can be covered in the pedagogical recommendations below prior to beginning the student practice sheets.

First, basic Base 10 place value concepts. Each place value digit is a factor of 10 greater or smaller than the adjacent digit. For example, the number 2,489 contains digits in the one's place (9), ten's place (8 or 80), hundred's place (4 or 400), and thousands place (2 or 2,000). As we move to the **<u>right</u>** between adjacent place value digits, the number becomes larger by a factor of 10 (or 10 times greater). The same is true for moving <u>one</u> place value digit to the **<u>left</u>**. The number is reduced by a factor of 10 (or decreased by 10 times.)

<u>Step 1:</u> Given the whole number **3,927**

Let's make an equality between our whole number and equivalent decimal number: **3 , 9 2 7 = 3 , 9 2 7 . 0**

*Many elementary students will **<u>not</u>** know that there is an **<u>IMPLIED</u>** <u>DECIMAL POINT omnipresent behind the one's digit when the decimal point is not written</u>.*

"Ask the students where the decimal point is located with the following whole numbers: 3 and 10 and 247 and 5,690?" *Most students will not know. However, after a couple of examples on subsequent school days via placing a decimal point to form an equivalent decimal number, they will understand and grasp this salient and critical mathematics' concept. Specifically, that the whole number 43 is equivalent to (43.) a decimal number (i.e., 43 = 43.).*

*Moreover, and importantly, if a student is in a store and they view a price of an item, and it states, 47 – that means the cost of that item is not .47 or 47 cents. It is 47**.** = 47 dollars or 47.00. Finally, the teacher must <u>repeatedly</u> show students (until all students master the concept) that zeroes can be added to the **<u>right</u>** of the decimal point, and it does not change the decimal's overall value.*

*For instance, 24 = 24**.** = 24.0 = 24.00 = 24.000 = 24.0000 = 24.0000 = 24.00000 = etc.*

*After teaching fourth and fifth grade children for many, many years, I discovered the majority of students will **<u>NOT</u>** initially understand this concept UNTIL a teacher stresses the concept. **This exercise is the first step and mini lesson in Base 10 multiplication and division.***

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Step 2: The power of Base 10 mathematics – using decimal point movements.

Part A.) Movement of a decimal to the **RIGHT** – <u>each</u> **time it** <u>increases</u> the value of the number by a factor of 10 (or 10 times).
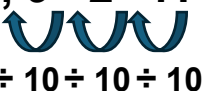
$$3,9\ 2\ 7 = 3,9\ 2\ 7\ .\ 0\ \ 0$$

x 10 x 10

> **The value of this decimal number (original whole number 3,927)** <u>increased</u> **by 10 times and 10 times or 100 times total.**
>
> **Or, 3,927 x 100 = 392,700 = 392,700.**

Part B.) Movement of a decimal to the **LEFT – <u>each</u> time it <u>decreases</u>** the value of the number by a factor of 10 (or 10 times).

$$3,9\ 2\ 7 = 3\ ,9\ \ 2\ \ 7.$$

÷ 10 ÷ 10 ÷ 10

> **The value of this decimal number (original whole number 3,927)** <u>decreased</u> **by 10 times and 10 times and 10 times or 1,000 times total.**
>
> **Or, 3,927 ÷ 1,000 = 3.927**

Note: The concept of the relative value changes between adjacent digits in whole numbers and decimals are assessed on intermediate elementary grades (third through fifth) <u>repeatedly</u> on standardized testing as of this writing in 2024. For clarity, students are required to understand that the relative movement between the one's and the ten's digit (for example) is 10 times, and the relative movement between the one's digit and the hundred's digit place values is 100 times (i.e., 10 x 10), and so forth.

Step 3: Base 10 mathematics from a fractional perspective.

A review of fractions is required. <u>A fraction can represent two entities or things</u>.

First, a fraction can represent a **<u>part to whole</u>** of EQUALLY divided parts of an object.

Second, a fraction can also represent and be viewed as a **<u>division problem</u>**.

It is the second definition of fractions that come into play with the division of Base 10 mathematics. The fraction's denominator is either 10, 100, 1,000, etc.
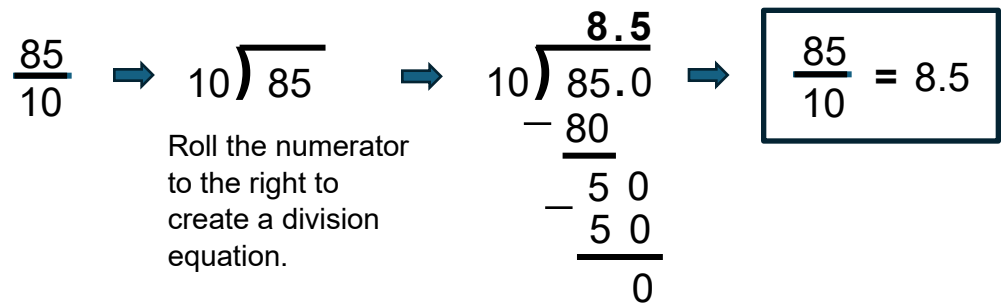
Let's work an example to illustrate this concept, computationally.

Example: Given an <u>improper</u> fraction: $\dfrac{85}{10}$

This <u>improper</u> fraction is a 'disguised' division equation. It is the second definition of what a fraction may represent. In effect, the numerator, 85, is divided by 10, the denominator.

This improper fraction can be simplified to a decimal number in **two ways** – computationally method (dividing) and via direct decimal movements to the left based on the denominator. See Note below.

A.) Dividing - Computationally.

$$\frac{85}{10} \Rightarrow 10\overline{)85} \Rightarrow 10\overline{)85.0} \Rightarrow \boxed{\frac{85}{10} = 8.5}$$

Roll the numerator to the right to create a division equation.

$$\begin{array}{r} 8.5 \\ 10\overline{)85.0} \\ -\,80 \\ \hline 5\ 0 \\ -5\ 0 \\ \hline 0 \end{array}$$

B.) Dividing – But by moving the Decimal point to the **left**.

$$\frac{85}{10} \Rightarrow 8\,5. \;(\div 10) \Rightarrow 8.5 \Rightarrow \boxed{\frac{85}{10} = 8.5}$$

Students recognize that they are dividing by 10. Places decimal point behind the one's digit.

Moves decimal **one** place (÷ 10) to the **left**.

Students should always write the equivalency so they understand what the overall process achieved.

In this case, an equivalency was calculated from an improper fraction to an equivalent decimal number.

Note: The denominator will always be 10, 100, 1,000 etc.

Section 1

Multiplication
of Base 10
Whole Numbers

(and decimals)

Student Practice Resource

Base 10 Multiplication Practice – V1

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, <u>**bubble**</u> the correct **product** or <u>write</u> the **product** inside the box provided.

1.)   **56**   **(Multiply by 100)**

- (A) **5.6**   (C) **560**
- (B) **0.56**   (D) **5,600**

2.)   **701**   **(Multiply by 10)**

- (A) **70.1**   (C) **701**
- (B) **7,010**   (D) **70,100**

3.)   **9**   **(Multiply by 1,000)**

☐ **is the <u>product</u>.**

- -

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, <u>**bubble**</u> the correct **product** or <u>write</u> the **product** inside the box provided.

1.)   **14**   **(Multiply by 100)**

- (A) **14.0**   (C) **140**
- (B) **1,400**   (D) **0.14**

2.)   **3.1**   **(Multiply by 10)**

- (A) **31**   (C) **310**
- (B) **0.31**   (D) **310.0**

3.)   **10.1**   **(Multiply by 1,000)**

☐ **is the <u>product</u>.**

Base 10 Multiplication Practice – V1

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> the correct <u>**product**</u> or <u>**write**</u> the <u>**product**</u> inside the box provided.

ANSWER KEY   *ANSWER KEY*

1.)   **56**   **(Multiply by 100)**   **56 = 56.**   **Move decimal point x 10 x10 = 100 (Right)**

Ⓐ 5.6   Ⓒ 560

Ⓑ 0.56   ● 5,600 ◄

56. 0 0. = 5,600. = 5,600

x 10   x10 = 100

2.)   **701**   **(Multiply by 10)**   **701 = 701.**   **Move decimal point x 10 = 10 (Right)**

Ⓐ 70.1   Ⓒ 701

● 7,010 ◄   Ⓓ 70,100

701.0 = 7,010. = 7,010

x 10

3.)   **9**   **(Multiply by 1,000)**   **9 = 9.**   **Move decimal point x 10 x 10 x10 = 1,000 (Right)**

► **9,000** is the <u>product</u>.   ▼

9.0 0 0 = 9,000. = 9,000

x 10 x 10 x 10 = 1,000

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> the correct <u>**product**</u> or <u>**write**</u> the <u>**product**</u> inside the box provided.

1.)   **14**   **(Multiply by 100)**   **14 = 14.**   **Move decimal point x 10 x10 = 100 (Right)**

Ⓐ 14.0   Ⓒ 140

● 1,400 ◄   Ⓓ 0.14

14. 0 0. = 1,400. = 1,400

x 10   x10 = 100

2.)   **3.1**   **(Multiply by 10)**   **Move decimal point x 10 = 10 (Right)**

● 31 ◄   Ⓒ 310

Ⓑ 0.31   Ⓓ 310.0

3.1 = 31. = 31

x 10

> **It is highly recommended to stress the math vocabulary term, "PRODUCT" to students.**

3.)   **10.1**   **(Multiply by 1,000)**   **10.1**   **Move decimal point x 10 x 10 x10 = 1,000 (Right)**

► **10,100** is the <u>product</u>.   ▼

10.1 0 0 = 10,100. = 10,100

x 10 x 10 x 10

Base 10 Multiplication Practice – V2

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, <u>**bubble**</u> the correct <u>**product**</u> or <u>**write**</u> the <u>**product**</u> inside the box provided.

1.)   **2.1**   **(Multiply by 100)**

    (A) **2.10**   (C) **210**

    (B) **21.0**   (D) **2,100**

2.)   **71**   **(Multiply by 10)**

    (A) **71.0**   (C) **71.00**

    (B) **710**   (D) **7.1**

3.)   **1.1**   **(Multiply by 1,000)**

    [   ] **is the <u>product</u>.**

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> the correct <u>**product**</u> or <u>**write**</u> the <u>**product**</u> inside the box provided.

1.)   **0.36**   **(Multiply by 10)**

    (A) **3.6**   (C) **36**

    (B) **0.036**   (D) **360**

2.)   **23.1**   **(Multiply by 100)**

    (A) **231**   (C) **2,310.**

    (B) **23.131**   (D) **0.231**

3.)   **6.94**   **(Multiply by 10)**

    [   ] **is the <u>product</u>.**

Base 10 Multiplication Practice – V2

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, <u>bubble</u> the correct **product** or <u>write</u> the **product** inside the box provided.

1.)   **2.1**   **(Multiply by 100)**

Ⓐ 2.10   ⬤ **210** ◀

Ⓑ 21.0   Ⓓ 2,100

Move decimal point x 10 x 10 = 100 (Right)

2.1 0. = 210. = 210

x 10   x10 = 100

2.)   **71**   **(Multiply by 10)**

Ⓐ 71.0   Ⓒ 71.00

⬤ **710** ◀   Ⓓ 7.1

71 = 71.   Move decimal point x 10 = 10 (Right)

71.0 = 710. = 710

x 10

> **Students must be automatic with the following:**
> 10 x 10 = 100   and   10 x 10 x 10 = 1,000

3.)   **1.1**   **(Multiply by 1,000)**

▶ | **1,100** | is the <u>product</u>. ▼

1.1   Move decimal point x10 x10 x10 = 1,000 (Right)

1.1 0 0 = 1,100. = 1,100

x10   x10   x10 = 1,000

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>bubble</u> the correct **product** or <u>write</u> the **product** inside the box provided.

1.)   **0.36**   **(Multiply by 10)**

⬤ **3.6** ◀   Ⓒ 36

Ⓑ 0.036   Ⓓ 360

Move decimal point x 10 (Right)

0.3 6 = 3.6

x 10

> **Tell Students:** *"Multiplication means the whole number or decimal is getting bigger."*

2.)   **23.1**   **(Multiply by 100)**

Ⓐ 231   ⬤ **2,310.** ◀

Ⓑ 23.131   Ⓓ 0.231

Move decimal point x 10 x 10 = 100 (Right)

23.1 0 = 2,310. = 2,310

x10   x10 = 100

> **It is highly recommended to stress the math vocabulary term, "PRODUCT" to students.**

3.)   **6.94**   **(Multiply by 10)**

▶ | **69.4** | is the <u>product</u>. ▼

Move decimal point x10 (Right)

6.9 4 = 69.4

x 10

Base 10 Multiplication Practice – V3

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, **bubble** the correct **product** or **write** the **product** inside the box provided.

1.) **3,250 x 100**

(A) **325,000**   (C) **3,250,000**

(B) **32,500**   (D) **32,250,000**

2.) **94 x 1,000**

(A) **9,400**   (C) **9.4000**

(B) **940**   (D) **94,000**

3.) **5.5 x 10**

[ ] **is the <u>product</u>.**

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>bubble</u> the correct <u>product</u> (or <u>answer choice</u>), or <u>write</u> the <u>product</u> inside the box provided.

1.) **35.8 x 100**

(A) **3,580**   (C) **35,800**

(B) **358**   (D) **No answer is correct.**

2.) **How much greater is the tens place than the ones place in the number 37,469?**

(A) **10 times**   (C) **1,000 times**

(B) **100 times**   (D) **No answer is correct.**

3.) **328,000 x 10**

[ ] **is the <u>product</u>.**

HINT: Write the new number. Then, add commas every 3 digits starting from the one's place.

Base 10 Multiplication Practice – V3

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, **bubble** the correct **product** or <u>write</u> the **product** inside the box provided.

1.) **3,250 x 100**

● **325,000** ◀ Ⓒ **3,250,000**

Ⓑ **32,500** Ⓓ **32,250,000**

3,250 = 3,250.

Move decimal point x 10 x 10 = 100

3,250. 0 0 = 325,000.

x 10 x10 = 100

2.) **94 x 1,000**

Ⓐ **9,400** Ⓒ **9.4000**

Ⓑ **940** ▶ ● **94,000**

94 = 94. **Move decimal point x 10 x 10 x 10 = 1,000 (Right)**

94.0 0 0 = 94,000. = 94,000

x10 x10 x10 = 1,000

> **Provided as many additional examples to procure student mastery.**

3.) **5.5 x 10**

▶ | **55** | **is the <u>product</u>.**

Move decimal point x10 (Right)

5.5 = 55. = 55

x10

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** the correct **product** (or <u>answer choice</u>), or <u>write</u> the **product** inside the box provided.

1.) **35.8 x 100**

▶ ● **3,580** Ⓒ **35,800**

Ⓑ **358** Ⓓ **No answer is correct.**

Move decimal point x 10 x 10 (Right)

35.8 0 = 3,580. = 3,580

x10 x10 = 100

1 jump in PV (x 10)

37,469

2.) **How much greater is the tens place than the ones place in the number 37,469?**

▶ ● **10 times** Ⓒ **1,000 times**

Ⓑ **100 times** Ⓓ **No answer is correct.**

> **Place value of '6' is tens.**
>
> **Place value of '9' is ones/units.**
>
> <u>**ONE**</u> **PV movement, therefore, the factor multiplication difference is 10 TIMES between Place Value positions.**

3.) **328,000 x 10**

▶ | **3,280,000** | **is the <u>product</u>.**

Move decimal point x10 (Right)

328,000.0 = 3,280,000.

x10

Base 10 Multiplication Practice – V4

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, **bubble** the correct **product** or **write** the **product** inside the box provided.

1.) **250,000 x 1,000**

(A) **25,000,000**   (C) **250,000.0**

(B) **2,500,000**   (D) **250,000,000**

2.) **3.4 x 1,000**

(A) **3,400**   (C) **3.400**

(B) **34,000**   (D) **340**

3.) **0.7 x 100**

☐ **is the product.**

- -

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, **bubble** the correct **product** (or **answer choice**), or **write** the **product** inside the box provided.

1.) **2.49 x 10**

(A) **2,490**   (C) **0.249**

(B) **249**   (D) **No answer is correct.**

2.) **How much greater is the thousands place than the tens place in the number 47,061?**

(A) **10 times**   (C) **1,000 times**

(B) **100 times**   (D) **No answer is correct.**

3.) **475,000 x 100**

☐ **is the product.**

Base 10 Multiplication Practice – V4

Directions: __Answer__ each question below by showing **ALL WORK**. Then, __bubble__ the correct **product** or __write__ the **product** inside the box provided.

1.) 250,000 x 1,000   250,000 = 250,000. (Move decimal point x10 x10 x10 = 1,000)

- (A) 25,000,000
- (C) 250,000.0
- (B) 2,500,000
- ● 250,000,000 ◀

250,000.0 0 0 = 250,000,000.

x10x10x10 = 1,000

2.) 3.4 x 1,000

Move decimal point x 10 x 10 x 10 = 1,000   (Right)

3.4 0 0 = 3,400. = 3,400

x10 x10 x10 = 1,000

- ▶ ● 3,400
- (C) 3.400
- (B) 34,000
- (D) 340

Careful: 3.4 = 3.400

> When multiplying 100 x .7 only move 1 decimal place from __Right to Left__. However, when moving decimal __Left to Right__ (0.7 x 100)...moving 2 decimal places.   *Same product!!!*

3.) 0.7 x 100

▶ [**70**] is the __product__.

$$\begin{array}{r} 100 \\ \times\ \ .7 \\ \hline 70.0 \end{array}$$ ___OR___

Move decimal point x10 x10 = 100 (Right)

0.7 0 = 70. = 70

x10x10 = 100

- -

Directions: __Answer__ each question below by showing ALL WORK. Then, __bubble__ the correct product (or __answer choice__), or __write__ the __product__ inside the box provided.

1.) 2.49 x 10

Move decimal point x 10 (Right)

2.4 9 = 24.9

x10

- (A) 2,490
- (C) 0.249
- (B) 249
- ● No answer is correct. ◀

2 jumps in PV (x10 x10)

47,061

2.) How much greater is the thousands place than the tens place in the number 47,061?

- (A) 10 times
- (C) 1,000 times
- ▶ ● 100 times
- (D) No answer is correct.

> Place value of '6' is tens.
>
> Place value of '7' is thousands.
>
> *TWO* PV movements, therefore, the factor multiplication difference is 100 TIMES between Place Value positions.

3.) 475,000 x 100

▶ [**47,500,000**] is the __product__.

Move decimal point x 10 x 10 (Right)

475,000.0 0 = 47,500,000.

x10 x10 = 100

Base 10 Multiplication Practice – V5

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, <u>bubble</u> the correct <u>product</u> or <u>write</u> the <u>product</u> inside the box provided.

1.) **10.2 x 100**

(A) **10,200**   (C) **102.2**

(B) **0.102**   (D) **1,020**

2.) **863 x 1,000**

(A) **8,630**   (C) **86,300**

(B) **863.0**   (D) **863,000**

3.) **19.56 x 10**

☐ **is the <u>product</u>.**

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Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, <u>bubble</u> the correct <u>product</u> (or <u>answer choice</u>), or <u>write</u> the <u>product</u> inside the box provided.

1.) **357 x 1,000**

(A) **3,570**   (C) **35,700**

(B) **357,000**   (D) **No answer is correct.**

2.) **How much greater is the thousands place than the ones place in the number 90,182?**

(A) **10 times**   (C) **1,000 times**

(B) **100 times**   (D) **No answer is correct.**

3.) **976,000 x 100**

☐ **is the <u>product</u>.**

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Base 10 Multiplication Practice – V5

Directions: <u>Answer</u> each question below by showing **ALL WORK**. Then, <u>bubble</u> the correct **product** or <u>write</u> the **product** inside the box provided.

1.) **10.2 x 100**

(A) **10,200** (C) **102.2**

(B) **0.102** ● **1,020** ◀

Move decimal point x 10 x 10 = 100 (Right)

10.2 0 = 1,020.

x10 x10 = 100

2.) **863 x 1,000**

(A) **8,630** (C) **86,300**

(B) **863.0** ● **863,000** ◀

863 = 863. *Move decimal point x 10 x 10 x 10 = 1,000 (Right)*

863.0 0 0 = 863,000. = 863,000

x10 x10 x10 = 1,000

3.) **19.56 x 10**

▶ | **195.6** | **is the product.**

Move decimal point x10 (Right)

19.56 = 195.6

x10

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>bubble</u> the correct <u>product</u> (or <u>answer choice</u>), or <u>write</u> the <u>product</u> inside the box provided.

1.) **357 x 1,000**

(A) **3,570** (C) **35,700**

▶ ● **357,000** (D) **No answer is correct.**

Move decimal point x 10 x 10 (Right)

357.0 0 0 = 357,000. = 357,000

x10x10x10 = 1,000

3 jumps in PV (x 10x10x10)

90,182

2.) **How much greater is the thousands place than the ones place in the number 90,182?**

(A) **10 times** ● **1,000 times** ▲

(B) **100 times** (D) **No answer is correct.**

Place value of '2' is in ones/units PV.

Place value of '0' is in the thousands PV.

THREE PV movements, therefore, the factor multiplication difference is 1,000 TIMES between Place Value positions.

3.) **976,000 x 100**

▶ | **97,600,000** | **is the product.**

Move decimal point x10x10 = 100 (Right)

976,000.00 = 97,600,000.

x10x10=100

Section 2

Division
of Base 10
Whole Numbers

Student Practice Resource

Base 10 Division Practice – V1

Directions: **Answer** each question below by showing ALL WORK. Then, **bubble** or **write** the correct
decimal.

1.) $\dfrac{56}{10}$ **Find the equivalent decimal.**

- (A) 5.6
- (C) 56
- (B) 0.56
- (D) 560

2.) $\dfrac{701}{100}$ **Find the equivalent decimal.**

- (A) 70.1
- (C) 7.01
- (B) 0.701
- (D) 70,100

3.) $\dfrac{1,201}{1,000}$ **Find the equivalent decimal.**

[ ] **is the decimal.**

- -

Directions: **Answer** each question below by showing ALL WORK. Then, **bubble** or **write** the correct
decimal.

1.) $\dfrac{140}{100}$ **Find the equivalent decimal.**

- (A) 14.0
- (C) 140
- (B) 1.4
- (D) 0.14

2.) $\dfrac{31}{10}$ **Find the equivalent decimal.**

- (A) 31
- (C) 3.1
- (B) 0.31
- (D) 310

3.) $\dfrac{509}{1,000}$ **Find the equivalent decimal.**

[ ] **is the decimal.**

Base 10 Division Practice – V1

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct <u>**decimal**</u>.

1.) $\frac{56}{10}$ **Find the equivalent decimal.**

Ask students, "What are we dividing by?"

● 5.6 ◀ Ⓒ 56

Ⓑ 0.56 Ⓓ 560

Move decimal point ÷ 10 (LEFT)

$$56 = 56. = 5.6$$
÷ 10

$$
\begin{array}{r}
5.6 \\
10\overline{)56.0} \\
-50 \downarrow \\
\hline
6\,0 \\
-6\,0 \\
\hline
0
\end{array}
$$

Note: Students must understand that they are dividing! $10\overline{)56} = 5.6$

2.) $\frac{701}{100}$ **Find the equivalent decimal.**

Ⓐ 70.1 ▶ ● 7.01

Ⓑ 0.701 Ⓓ 70,100

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT)

$$701 = 701. = 7.01$$
÷10÷10 = ÷100 (Dividing by 100)

3.) $\frac{1,201}{1,000}$ **Find the equivalent decimal.**

▶ **1.201** is the <u>decimal</u>.

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

$$1,201 = 1,201. = 1.201$$
÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

- -

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct <u>**decimal**</u>.

1.) $\frac{140}{100}$ **Find the equivalent decimal.**

Ⓐ 14.0 Ⓒ 140

Ask students, "What are we dividing by?"

● 1.4 ◀ Ⓓ 0.14

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT)

$$140 = 140. = 1.40 = 1.4$$
÷10÷10 = ÷100 (Dividing by 100)

2.) $\frac{31}{10}$ **Find the equivalent decimal.**

Ⓐ 31 ▶ ● 3.1

Ⓑ 0.31 Ⓓ 310

Move decimal point ÷ 10 (LEFT)

$$31 = 31. = 3.1$$
÷ 10

$$
\begin{array}{r}
3.1 \\
10\overline{)31.0} \\
-30 \downarrow \\
\hline
1\,0 \\
-1\,0 \\
\hline
0
\end{array}
$$

Note: Students must understand that they are dividing! $10\overline{)31} = 3.1$

Write 0.509 and <u>not</u> .509 – it is more clear!

3.) $\frac{509}{1,000}$ **Find the equivalent decimal.**

▶ **0.509** is the <u>decimal</u>.

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

$$509 = 509. = 0.509$$
÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

Base 10 Division Practice – V2

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct <u>**decimal**</u>.

1.) $\dfrac{7,314}{1,000}$ **Find the equivalent decimal.**

     (A) **73.14**   (C) **0.7314**

     (B) **7.314**   (D) **7,314.0**

2.) $\dfrac{67}{100}$ **Find the equivalent decimal.**

     (A) **6.7**   (C) **6.70**

     (B) **0.67**   (D) **67,000**

3.) $\dfrac{98}{10}$ **Find the equivalent decimal.**

     [   ] **is the <u>decimal</u>.**

- -

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct <u>**decimal**</u>.

1.) $\dfrac{140}{100}$ **Find the equivalent decimal.**

     (A) **14.0**   (C) **140**

     (B) **1.4**   (D) **0.14**

2.) $\dfrac{8}{100}$ **Find the equivalent decimal.**

     (A) **0.8**   (C) **0.08**

     (B) **0.80**   (D) **0.008**

3.) $\dfrac{12,313}{1,000}$ **Find the equivalent decimal.**

     [   ] **is the <u>decimal</u>.**

Base 10 Division Practice – V2

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>bubble</u> or <u>write</u> the correct <u>decimal</u>.

1.) $\dfrac{7,314}{1,000}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

(A) 73.14   (C) 0.7314

● 7.314 ◀   (D) 7,314.0

$$7,314 = 7,314. = 7.314$$

÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

Ask students, *"What are we dividing by?"*   **(1,000)**

2.) $\dfrac{67}{100}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT)

(A) 6.7   (C) 6.70

● 0.67 ◀   (D) 67,000

$$67 = 67. = 0.67$$

÷10÷10 = ÷100 (Dividing by 100)

3.) $\dfrac{98}{10}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 (LEFT)

$$98 = 98. = 9.8$$

÷ 10

▶ | **9.8** | **is the <u>decimal</u>.**

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>bubble</u> or <u>write</u> the correct <u>decimal</u>.

1.) $\dfrac{140}{100}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT)

(A) 14.0   (C) 140

● 1.4 ◀   (D) 0.14

$$140 = 140. = 1.40 = 1.4$$

÷10÷10 = ÷100 (Dividing by 100)

2.) $\dfrac{8}{100}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT)

$$8 = 8. = 0.08$$

÷10÷10 = ÷100

Ask students, *"What are we dividing by?"* **(100)**

(A) 0.8   ▶ ● 0.08

(B) 0.80   (D) 0.008

<u>Note:</u> **Students must understand that they are dividing!** $100\overline{)8}$ = 0.08

$$\begin{array}{r} 0.08 \\ 100\overline{)8.00} \\ -\underline{0}\downarrow \\ 80 \\ -\underline{0}\downarrow \\ 800 \\ -\underline{800} \\ 0 \end{array}$$

3.) $\dfrac{12,313}{1,000}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

$$12,313 = 12,313. = 12.313$$

÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

▶ | **12.313** | **is the <u>decimal</u>.**

Base 10 Division Practice – V3

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct <u>**decimal**</u> or <u>**fraction**</u>.

1.) $\dfrac{5}{10}$ **Find the equivalent decimal.**

(A) 0.005   (C) 0.5

(B) 0.05   (D) 5.0

2.) **Find the equivalent decimal and fraction.**

(A) $7.05 = \dfrac{750}{10}$ (B) $7.5 = \dfrac{750}{100}$ (C) $7.05 = \dfrac{75}{10}$ (D) $7.5 = \dfrac{75}{100}$

3.) $\dfrac{5,005}{1,000}$ **Find the equivalent decimal.**

[ ] **is the <u>decimal</u>.**

- -

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct <u>**decimal**</u> or <u>**fraction**</u>.

1.) $\dfrac{100}{100}$ **Find the equivalent decimal.**

(A) 100   (C) 10

(B) 1   (D) Not Here

2.) **Find the equivalent decimal and fraction.**

(A) $2.8 = \dfrac{2,800}{1,000}$ (B) $2.8 = \dfrac{280}{100}$ (C) $2.8 = \dfrac{28}{10}$ (D) All are correct

3.) $\dfrac{320}{1,000}$ **Find the equivalent decimal.**

[ ] **is the <u>decimal</u>.**

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct <u>decimal</u> or <u>fraction</u>.

Move decimal point ÷ 10 (LEFT)

1.) $\frac{5}{10}$ **Find the equivalent decimal.**

$$5 = 5. = 0.5$$
÷ 10

$$\begin{array}{r} 0.5 \\ 10\overline{)5.0} \\ -\underline{0}\downarrow \\ 5\,0 \\ -\underline{5\,0} \\ 0 \end{array}$$

Ask students, "What are we dividing by?"

(A) 0.005   ● 0.5 ◄

(B) 0.05   (D) 5.0

Note: Students must understand that they are dividing! $10\overline{)5} = 0.5$

2.) Find the equivalent decimal and fraction.

(A) $7.05 = \frac{750}{10}$ ● $7.5 = \frac{750}{100}$ ◄   (C) $7.05 = \frac{75}{10}$ (D) $7.5 = \frac{75}{100}$

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT) $750 = 750. = 7.50 = 7.5$
÷10÷10 = ÷100 (Dividing by 100)

3.) $\frac{5,005}{1,000}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

► | **5.005** | **is the decimal.** $5,005 = 5,005. = 5.005$
÷10÷10÷10 = ÷1,000 ~ Dividing.

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct <u>decimal</u> or <u>fraction</u>.

1.) $\frac{100}{100}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT)

(A) 100   (C) 10

● 1 ◄   (D) Not Here

$$100 = 100. = 1.00 = 1$$
÷10÷10 = ÷100 (Dividing by 100)

2.) Find the equivalent decimal and fraction.

(A) $2.8 = \frac{2,800}{1,000}$ (B) $2.8 = \frac{280}{100}$ (C) $2.8 = \frac{28}{10}$ ● **All are correct** ◄

All decimal - fractions in 2.) are equivalent. Each decimal is equal to 2.8 = 2.80 = 2.800

It is recommended to teach students to write decimals < 1 whole as 0.32 <u>not</u> .32

3.) $\frac{320}{1,000}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

► | **0.32** | **is the decimal.** $320 = 320. = 0.320 = 0.32$
÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

Base 10 Division Practice – V4

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **<u>bubble</u>** or **<u>write</u>** the correct decimal or answer choice.

1.) How much greater is the thousands place than the tens place in the number 923,701?

(A) 10 times   (C) 1,000 times

(B) 100 times   (D) No answer is correct.

2.) Find the equivalent decimal and fraction.

(A) $2.03 = \dfrac{203}{10}$ (B) $2.3 = \dfrac{23}{100}$ (C) $2.03 = \dfrac{230}{10}$ (D) $2.3 = \dfrac{230}{100}$

3.) $\dfrac{60}{1,000}$ Find the equivalent decimal.

[ ] is the <u>decimal</u>.

(Difficult!)

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **<u>bubble</u>** or **<u>write</u>** the correct decimal or answer choice.

1.) $\dfrac{10}{10}$ Find the equivalent decimal.

(A) 1.0   (C) 0.1

(B) 10   (D) Not Here

2.) Find the equivalent decimal and fraction.

(A) $9.3 = \dfrac{9,300}{1,000}$ (B) $9.03 = \dfrac{903}{100}$ (C) $9.3 = \dfrac{93}{10}$ (D) All are correct

3.) $\dfrac{1,401}{1,000}$ Find the equivalent decimal.

[ ] is the <u>decimal</u>.

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct decimal or answer choice.

1.) How much greater is the thousands place than the tens place in the number 923,701?

2 jumps in PV (x10 x10)
923,701

(A) 10 times   (C) 1,000 times

▶ ● 100 times   (D) No answer is correct.

Place value of '0' is tens.

Place value of '3' is thousands.

TWO PV movements, therefore, the factor multiplication difference is 100 TIMES between Place Value positions.

2.) Find the equivalent decimal and fraction.

(A) $2.03 = \dfrac{203}{10}$ (B) $2.3 = \dfrac{23}{100}$ (C) $2.03 = \dfrac{230}{10}$ ● $2.3 = \dfrac{230}{100}$ ◀

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT) $230 = 230. = 2.30 = 2.3$

÷10÷10 = ÷100 (Dividing by 100)

3.) $\dfrac{60}{1,000}$ Find the equivalent decimal.

▶ | 0.06 = 0.060 | is the <u>decimal</u>.
(Difficult!)

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)
$60 = \ 60. \ = .060 = 0.060 = 0.06$

÷10÷10÷10 = ÷1,000 ~ Dividing.

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct decimal or answer choice.

1.) $\dfrac{10}{10}$ Find the equivalent decimal.

Move decimal point ÷ 10 (LEFT)

● 1.0 ◀   (C) 0.1

(B) 10   (D) Not Here

$10 = 10. = 1.0 = 1$

÷10 (Dividing by 10)

2.) Find the equivalent decimal and fraction.

(A) $9.3 = \dfrac{9,300}{1,000}$ (B) $9.03 = \dfrac{903}{100}$ (C) $9.3 = \dfrac{93}{10}$ ● All are correct ◀

All decimal - fractions in 2.) are equivalent. Each decimal is equal to the fraction.

3.) $\dfrac{1,401}{1,000}$ Find the equivalent decimal.

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

▶ | 1.401 | is the <u>decimal</u>.

$1,401 = 1,401. = 1.401$

÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

Base 10 Division Practice – V5

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct decimal or answer choice.

1.) How much greater is the thousands place than the hundreds place in the number 514,239?

(A) 10 times   (C) 1,000 times

(B) 100 times   (D) No answer is correct.

2.) Find the equivalent decimal and fraction.

(A) $1.09 = \dfrac{109}{10}$ (B) $1.9 = \dfrac{19}{100}$ (C) $1.09 = \dfrac{109}{100}$ (D) $1.9 = \dfrac{109}{100}$

3.) $\dfrac{3,700}{1,000}$ Find the equivalent decimal.

[ ] is the <u>decimal</u>.

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct decimal or answer choice.

1.) $\dfrac{1,000}{1,000}$ Find the equivalent decimal.

(A) 1   (C) 0.10

(B) 1,000   (D) Not Here

2.) Find the equivalent decimal and fraction.

(A) $4.25 = \dfrac{4,250}{1,000}$ (B) $4.25 = \dfrac{425}{10}$ (C) $4.25 = \dfrac{4,250}{10}$ (D) None are correct

3.) $\dfrac{25}{1,000}$ Find the equivalent decimal.

[ ] is the <u>decimal</u>.

Base 10 Division Practice – V5

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct decimal or answer choice.

1 jump in PV (x10)

1.) How much greater is the thousands place than the hundreds place in the number 514,239?

514,239

▶ ● **10 times**   Ⓒ **1,000 times**

Ⓑ **100 times**   Ⓓ **No answer is correct.**

> Place value of '2' is hundreds.
> Place value of '4' is thousands.
>
> _ONE_ PV movement, therefore, the factor multiplication difference is 10 TIMES between Place Value positions.

2.) Find the equivalent decimal and fraction.

Ⓐ $1.09 = \dfrac{109}{10}$ Ⓑ $1.9 = \dfrac{19}{100}$ ● $1.09 = \dfrac{109}{100}$ ◀   Ⓓ $1.9 = \dfrac{109}{100}$

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT) $109 = 109. = 1.09$

÷10÷10 = ÷100 (Dividing by 100)

3.) $\dfrac{3,700}{1,000}$ Find the equivalent decimal.

▶ **3.7** is the <u>decimal</u>.

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

$3,700 = 3700. = 3.700 = 3.7$

÷10÷10÷10 = ÷1,000 ~ Dividing.

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct decimal or answer choice.

1.) $\dfrac{1,000}{1,000}$ Find the equivalent decimal.

● **1** ◀   Ⓒ **0.10**

Ⓑ **1,000**   Ⓓ **Not Here**

Move decimal point ÷ 10 ÷ 10 ÷ 10   (LEFT)

$1,000 = 1,000. = 1.0 = 1$

÷10÷10÷10 (Dividing by 1,000)

2.) Find the equivalent decimal and fraction.

● $4.25 = \dfrac{4,250}{1,000}$ ◀   Ⓑ $4.25 = \dfrac{425}{10}$ Ⓒ $4.25 = \dfrac{4,250}{10}$ Ⓓ **None are correct**

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

$4,250 = 4,250. = 4.250 = 4.25$

÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

3.) $\dfrac{25}{1,000}$ Find the equivalent decimal.

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

▶ **0.025** is the <u>decimal</u>.

$25 = 25. = .025 = 0.025$

÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

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Section 3

Multiplication and Division of Base 10 Whole Numbers/Decimals

– *Mixed Practice* –

Student Practice Resource

Base 10 Mixed Practice – V1

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct answer.

1.) $\dfrac{37}{10}$ **Find the equivalent decimal.**

- (A) 3.7
- (B) 0.37
- (C) 37
- (D) 370

2.) **4,190 x 100**

- (A) 419,000
- (B) 41,900
- (C) 4,190,000
- (D) 41,900,000

3.) $\dfrac{6,303}{1,000}$ **Find the equivalent decimal.**

[ ] **is the <u>decimal</u>.**

- -

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct answer.

1.) **25.7 x 100**

- (A) 2,570
- (B) 257
- (C) 25,700
- (D) No answer is correct.

2.) $\dfrac{98}{10}$ **Find the equivalent decimal.**

- (A) 98
- (B) 0.98
- (C) 9.8
- (D) 980

3.) **7.2 x 10**

[ ] **is the <u>product</u>.**

Base 10 Mixed Practice – V1

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct answer.

1.) $\frac{37}{10}$ **Find the equivalent decimal.**

Ask students, "What are we dividing by?"

● 3.7 ◀ Ⓒ 37

Ⓑ 0.37 Ⓓ 370

Move decimal point ÷ 10 (LEFT)

$37 = 37. = 3.7$

÷ 10

$$\begin{array}{r} 3.7 \\ 10\overline{)37.0} \\ -30\downarrow \\ \hline 7\ 0 \\ -7\ 0 \\ \hline 0 \end{array}$$

Note: Students must understand that they are dividing! $10\overline{)37} = 3.7$

2.) **4,190 x 100**

● 419,000 ◀ Ⓒ 4,190,000

Ⓑ 41,900 Ⓓ 41,900,000

$4,190 = 4,190.$

Move decimal point x 10 x 10 = 100 (Right)

$4,190.\ 0\ 0 = 419,000.$

x 10 x10 = 100

3.) $\frac{6,303}{1,000}$ **Find the equivalent decimal.**

▶ **6.303** **is the <u>decimal</u>.**

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

$6,303 = 6,303. = 6.303$

÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct answer.

1.) **25.7 x 100**

● 2,570 ◀ Ⓒ 25,700

Ⓑ 257 Ⓓ No answer is correct.

Move decimal point x 10 x 10 (Right)

$25.7\ 0 = 2,570. = 2,570$

x10 x10 = 100

2.) $\frac{98}{10}$ **Find the equivalent decimal.**

Ⓐ 98 ▶ ● 9.8

Ⓑ 0.98 Ⓓ 980

Move decimal point ÷ 10 (LEFT)

$98 = 98. = 9.8$

÷ 10

$$\begin{array}{r} 9.8 \\ 10\overline{)98.0} \\ -90\downarrow \\ \hline 8\ 0 \\ -8\ 0 \\ \hline 0 \end{array}$$

Note: Students must understand that they are dividing! $10\overline{)98} = 9.8$

3.) **7.2 x 10**

72 **is the <u>product</u>.**

Move decimal point x10 (Right)

$7.2 = 72. = 72$

x10

Base 10 Mixed Practice – V2

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **<u>bubble</u>** or **<u>write</u>** the correct decimal or answer choice.

1.) How much greater is the thousands place than the ones place in the number 519,387?

- (A) 10 times
- (C) 1,000 times
- (B) 100 times
- (D) No answer is correct.

2.) Find the equivalent decimal and fraction.

- (A) $8.04 = \dfrac{804}{10}$
- (B) $8.4 = \dfrac{84}{100}$
- (C) $8.04 = \dfrac{840}{10}$
- (D) $8.4 = \dfrac{840}{100}$

3.) 475,000 x 1,000

is the <u>product</u>.

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **<u>bubble</u>** or **<u>write</u>** the correct decimal or answer choice.

1.) 257 x 10

- (A) 2,570
- (C) 25,700
- (B) 257
- (D) No answer is correct.

2.) Find the equivalent decimal and fraction.

- (A) $2.9 = \dfrac{2,900}{1,000}$
- (B) $2.09 = \dfrac{209}{100}$
- (C) $2.9 = \dfrac{29}{10}$
- (D) All are correct

3.) $\dfrac{270}{1,000}$ Find the equivalent decimal.

is the <u>decimal</u>.

Base 10 Mixed Practice – V2

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct decimal or answer choice.

3 jumps in PV (x10 x10 x10)

519,387

1.) How much greater is the thousands place than the ones place in the number 519,387?

(A) 10 times ▶ ● 1,000 times

(B) 100 times   (D) No answer is correct.

> Place value of '7' is ones.
> Place value of '9' is thousands.
>
> *THREE* PV movements, therefore, the factor multiplication difference is 1,000 TIMES between Place Value positions.

2.) Find the equivalent decimal and fraction.

(A) $8.04 = \dfrac{804}{10}$ (B) $8.4 = \dfrac{84}{100}$ (C) $8.04 = \dfrac{840}{10}$ ● $8.4 = \dfrac{840}{100}$ ◀

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT) $840 = 840. = 8.40 = 8.4$

÷10÷10 = ÷100 (Dividing by 100)

3.) 475,000 x 1,000

$475,000 = 475,000.$

Move decimal point x 10 x 10 x 10 (Right)

| **475,000,000** | is the <u>product</u>. $475,000. = 475,000,000.$

x10 x10 x10 = 1,000

- -

Directions: <u>**Answer**</u> each question below by showing ALL WORK. Then, <u>**bubble**</u> or <u>**write**</u> the correct decimal or answer choice.

Move decimal point x 10 (Right)

$257 = 257.$

1.) 257 x 10

$257. = 2,570. = 2,570$

● 2,570 ◀   (C) 25,700

x10

(B) 257   (D) No answer is correct.

2.) Find the equivalent decimal and fraction.

(A) $2.9 = \dfrac{2,900}{1,000}$ (B) $2.09 = \dfrac{209}{100}$ (C) $2.9 = \dfrac{29}{10}$ ● All are correct ◀

All decimal - fractions in 2.) are equivalent.

Each decimal is equal to the improper fraction.

3.) $\dfrac{270}{1,000}$ Find the equivalent decimal.

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

$270 = 270. = 0.270 = 0.27$

▶ | **0.27** | is the <u>decimal</u>.

÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

Base 10 Mixed Practice – V3

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct answer.

1.) $\frac{51}{100}$ **Find the equivalent decimal.**

- (A) 5.1
- (C) 51
- (B) 0.51
- (D) 510

2.) 8,030 x 10

- (A) 803,000
- (C) 80,300
- (B) 803
- (D) Not Here

3.) $\frac{45}{10}$ **Find the equivalent decimal.**

[   ] **is the <u>decimal</u>.**

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct answer.

1.) 0.423 x 100

- (A) 4.23
- (C) 0.423
- (B) 423
- (D) **No answer is correct.**

2.) $\frac{707}{100}$ **Find the equivalent decimal.**

- (A) 70.7
- (C) 7.7
- (B) 0.707
- (D) 7.07

3.) 0.674 x 1,000

[   ] **is the <u>product</u>.**

Base 10 Mixed Practice – V3

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct answer.

Move decimal point ÷ 10 ÷ 10 (LEFT)

1.) $\frac{51}{100}$ **Find the equivalent decimal.**

$51 = 51. = 51. = .51 = 0.51$

÷ 10 ÷10

(A) 5.1   (C) 51

● 0.51 ◀   (D) 510

Ask students, "What are we dividing by?" (100)

2.) 8,030 x 10 $8,030 = 8,030.$

(A) 803,000   ● 80,300 ◀

(B) 803   (D) Not Here

Move decimal point x 10 (Right)

$8,030.0 = 80,300.$

x 10

3.) $\frac{45}{10}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 (Left)

▶ | 4.5 | **is the <u>decimal</u>.**

$45 = 45. = 4.5$

÷10 = (Dividing by 10)

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct answer.

Move decimal point x 10 x 10 (Right)

1.) 0.423 x 100

$0.4\ 2\ 3 = 42.3$

x10 x10 = 100

(A) 4.23   (C) 0.423

(B) 423   ● **No answer is correct.** ◀

2.) $\frac{707}{100}$ **Find the equivalent decimal.**

Move decimal point ÷ 10 ÷ 10 (LEFT)

$707 = 707. = 7.07$

÷ 10 ÷ 10

(A) 70.7   (C) 7.7

(B) 0.707   ● 7.07 ◀

3.) 0.674 x 1,000

Move decimal point x10 x10 x10 (Right)

| 674 | **is the <u>product</u>.**

$0.6\ 7\ 4 = 674$

x10 x10 x10 = 1,000

Base 10 Mixed Practice – V4

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct decimal or answer choice.

1.) How much greater is the thousands place than the tens place in the number 305,189?

  (A) 10 times   (C) 1,000 times

  (B) 100 times   (D) No answer is correct.

2.) Find the equivalent decimal and fraction.

(A) $1.09 = \dfrac{109}{100}$ (B) $1.9 = \dfrac{19}{100}$ (C) $1.09 = \dfrac{109}{10}$ (D) $1.9 = \dfrac{190}{10}$

3.) 234,000 x 100

  [ ] **is the product.**

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, **bubble** or **write** the correct decimal or answer choice.

1.) 5.55 x 10

  (A) 5,550   (C) 5.55

  (B) 55.5   (D) No answer is correct.

2.) Find the equivalent decimal and fraction.

(A) $2.7 = \dfrac{2,700}{1,000}$ (B) $2.07 = \dfrac{207}{100}$ (C) $2.7 = \dfrac{27}{10}$ (D) All are correct

3.) $\dfrac{7}{1,000}$ Find the equivalent decimal.

  [ ] **is the decimal.**

Base 10 Mixed Practice – V4

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>bubble</u> or <u>write</u> the correct decimal or answer choice.

2 jumps in PV (x10 x10)

305,189

1.) How much greater is the thousands place than the tens place in the number 305,189?

(A) 10 times   (C) 1,000 times

▶ ● 100 times   (D) No answer is correct.

Place value of '8' is tens.

Place value of '5' is thousands.

TWO PV movements, therefore, the factor multiplication difference is 100 TIMES between Place Value positions.

2.) Find the equivalent decimal and fraction.

● $1.09 = \dfrac{109}{100}$ ◀ (B) $1.9 = \dfrac{19}{100}$ (C) $1.09 = \dfrac{109}{10}$ (D) $1.9 = \dfrac{190}{10}$

Move decimal point ÷ 10 ÷ 10 = ÷ 100 (LEFT)

$109 = 109. = 1.09$

÷10÷10 = ÷100 (Dividing by 100)

3.) 234,000 x 100

| 23,400,000 | is the <u>product</u>.

Move decimal point x 10 x 10 (Right)

$234,000. = 23,400,000.$

x10 x10 = 100

- -

Directions: <u>Answer</u> each question below by showing ALL WORK. Then, <u>bubble</u> or <u>write</u> the correct decimal or answer choice.

1.) 5.55 x 10

(A) 5,550   (C) 5.55

● 55.5 ◀   (D) No answer is correct.

Move decimal point x 10 (Right)

$5.55 = 55.5$

x10

2.) Find the equivalent decimal and fraction.

(A) $2.7 = \dfrac{2,700}{1,000}$ (B) $2.07 = \dfrac{207}{100}$ (C) $2.7 = \dfrac{27}{10}$ ● All are correct ◀

All decimal - fractions in 2.) are equivalent.

Each decimal is equal to the improper fraction.

3.) $\dfrac{7}{1,000}$ Find the equivalent decimal.

▶ | 0.007 | is the <u>decimal</u>.

Move decimal point ÷ 10 ÷ 10 ÷10 = 1,000 (Left)

$7 = 0.007. = 0.007$

÷10÷10÷10 = ÷1,000 (Dividing by 1,000)

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