Merit Tutoring

WORKSHEET 25

Year 6 Mathematics: Fractions, Decimals & Percentages

Multiplying Decimals by 10/100

Focus: Multiplying by 10 and 100

Name: _____ **Date:** _____

The Jumping Decimal Point Rule

When multiplying decimals by powers of 10:

Multiply by 10: The decimal point jumps **1 place to the RIGHT**

Example: $3.45 \times 10 = 34.5$

Multiply by 100: The decimal point jumps **2 places to the RIGHT**

Example: $3.45 \times 100 = 345$

Multiply by 1000: The decimal point jumps **3 places to the RIGHT**

Example: $3.45 \times 1000 = 3450$

Visual Jump: 4.5×10

Jump!

4 . 5 becomes 4 5 . 0

Answer: 45

Remember: If you need to fill empty spaces, use ZEROS!

Example: $4.2 \times 100 = 420$ (added a zero)

Section 1: Multiplying by 10 (Fluency)

1. Look at the jump visual:

$$3.45 \xrightarrow{\times 10}$$

Calculate: 3.45×10

Answer: _____

2. Calculate: 4.5×10

Answer: _____

3. Calculate: 0.32×10

Answer: _____

4. Calculate: 7.8×10

Answer: _____

5. Calculate: 0.06×10

Answer: _____

6. Calculate: 12.34×10

Answer: _____

POWER PLAYER!

Power Penguin

Why did the penguin love multiplying by 10?
Because it made everything ten-tastic!

Section 2: Multiplying by 100 (Reasoning)

7. Calculate: 2.15×100
(Remember: Jump 2 places to the right!)

Answer: _____

8. Calculate: 0.06×100

Answer: _____

9. Calculate: 5.43×100

Answer: _____

10. Calculate: 0.8×100

Answer: _____

11. Look at the place value slider:

H	T	O	.t
		3	4

$\times 100$

$3.4 \times 100 = 340$

Calculate: 3.4×100

Answer: _____

JUMP CHAMPION!

Jackrabbit

Why did the rabbit love decimal jumps?

Because they were hop-timistic about getting bigger!

Section 3: Adding Zeros (Challenge)

12. Calculate: 4.2×100
(Hint: You need to add a zero!)

Answer: _____

13. Calculate: 1.5×1000

Answer: _____

14. Calculate: 0.07×100

Answer: _____

15. Calculate: 6.8×1000

Answer: _____

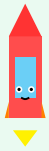
16. True or False: When you multiply 0.5×100, you get 50.

Answer: _____

17. Complete the pattern:
$2.3 \times 10 = 23$
$2.3 \times 100 = 230$
$2.3 \times 1000 =$ _____

Answer: _____

ZERO HERO!



Power Rocket

Why did the rocket love powers of 10?

Because they helped it reach astronomical heights!

Excellent Work! Check your answers on the next page.

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ANSWER KEY

Worksheet 25: Multiplying by 10 & 100

Section 1: Multiplying by 10

1. 34.5 (decimal jumps 1 place right)
2. 45 (or 45.0)
3. 3.2
4. 78
5. 0.6
6. 123.4

Section 2: Multiplying by 100

7. 215 (decimal jumps 2 places right)
8. 6
9. 543
10. 80
11. 340

Section 3: Adding Zeros

12. 420 (jump 2 places, add a zero)
13. 1500 (jump 3 places, add two zeros)
14. 7
15. 6800 (jump 3 places, add two zeros)
16. True ($0.5 \times 100 = 50$)
17. 2300 (pattern continues: multiply by 1000)

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WORKSHEET 26

Year 6 Mathematics: Fractions, Decimals & Percentages

Multiplying Decimals by 10/100

Focus: Missing Numbers and Money Applications

Name: _____ **Date:** _____

Working Backwards with Powers of 10

Finding the Missing Multiplier:

If you know the answer, you can work backwards!

Example: $4.5 \times \_\_\_\_ = 45$

Think: What makes 4.5 become 45?

The decimal moved 1 place right, so we multiplied by **10**.

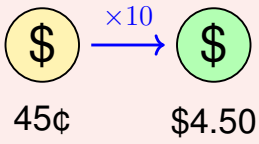
Example: $0.07 \times \_\_\_\_ = 7$

Think: 0.07 to 7 is 2 jumps right, so we multiplied by **100**.

Money Tip:

$0.45 means 45 cents. If you buy 10 items at 45 cents each:

$0.45 \times 10 = 4.50 = \$4.50$



Section 1: Mixed Practice (Fluency)

1. $3.67 \times 10 =$ _____

Answer: _____

2. $9.1 \times 100 =$ _____

Answer: _____

3. $0.45 \times 10 =$ _____

Answer: _____

4. $1.234 \times 100 =$ _____

Answer: _____

5. $0.008 \times 1000 =$ _____

Answer: _____

6. $7.5 \times 100 =$ _____

Answer: _____

DECIMAL DYNAMO!

Lightning

Why did the lightning bolt love decimals?

Because it could strike with shocking speed!

Section 2: Missing Multipliers (Reasoning)

7. Fill in the blank: $4.5 \times \_\_\_\_\_ = 45$

Answer: _____

8. Fill in the blank: $0.07 \times \_\_\_\_\_ = 7$

Answer: _____

9. Fill in the blank: $6.2 \times \_\_\_\_\_ = 620$

Answer: _____

10. Fill in the blank: $0.9 \times \_\_\_\_\_ = 9$

Answer: _____

11. Fill in the blank: $1.23 \times \_\_\_\_\_ = 1230$

Answer: _____

MYSTERY SOLVER!

Detective

Why did the detective love missing numbers?

Because finding them was always a power-ful case!

Section 3: Money Problems (Challenge)

12. One lollipop costs $0.45. How much do 10 lollipops cost?

Answer: _____

13. A sticker costs $0.05. How much do 100 stickers cost?

Answer: _____

14. A pencil costs $1.25. How much do 10 pencils cost?

Answer: _____

15. A notebook costs $2.35. How much do 100 notebooks cost?

Answer: _____

16. A drink costs $0.75. I buy 10 drinks. How much change do I get from $10?

Answer: _____

17. True or False: If an item costs $0.12, then 100 items cost $12.

Answer: _____

MONEY MASTER!

Piggy Bank

Why did the piggy bank love powers of 10?

Because savings grew ten times faster!

Outstanding Work! Check your answers on the next page.

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ANSWER KEY

Worksheet 26: Missing Numbers & Money

Section 1: Mixed Practice

1. 36.7
2. 910
3. 4.5
4. 123.4
5. 8
6. 750

Section 2: Missing Multipliers

7. 10 (4.5 to 45 is 1 jump right)
8. 100 (0.07 to 7 is 2 jumps right)
9. 100 (6.2 to 620 is 2 jumps right)
10. 10 (0.9 to 9 is 1 jump right)
11. 1000 (1.23 to 1230 is 3 jumps right)

Section 3: Money Problems

12. \$4.50 ($0.45 \times 10 = 4.50$)
13. \$5 ($0.05 \times 100 = 5.00$)
14. \$12.50 ($1.25 \times 10 = 12.50$)
15. \$235 ($2.35 \times 100 = 235.00$)
16. \$2.50 (10 drinks cost $0.75 \times 10 = \$7.50$; change = 10 - 7.50 = 2.50)
17. True ($0.12 \times 100 = 12.00 = \$12$)

Spectacular Success!

You've mastered Multiplying Decimals by Powers of 10!
From jumping decimals to money mathematics!