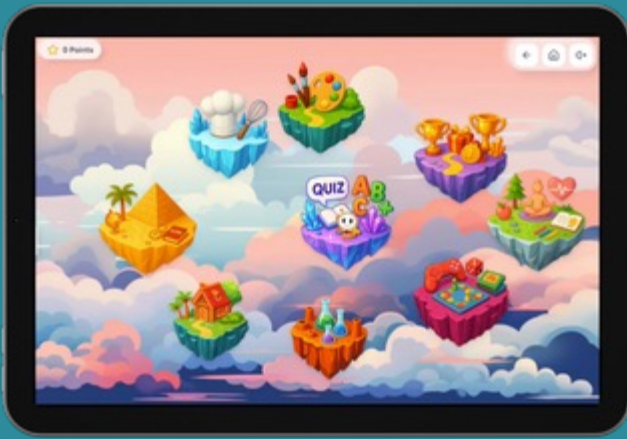


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Place Value After the Decimal - Year 4

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DECIMAL PLACE VALUE

Ones, tenths and hundredths

ONES	TENTHS	HUNDREDTHS
2	4	7

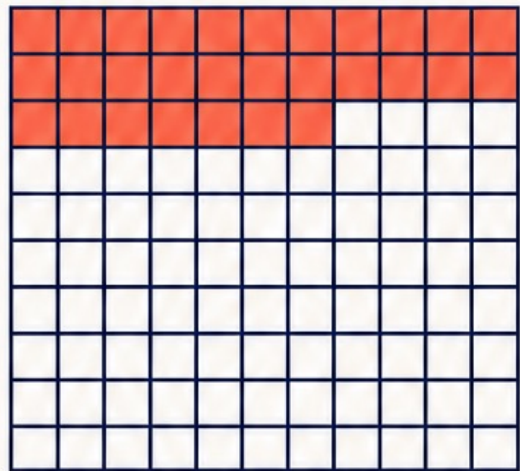
Four tenths

$$\frac{4}{10} = 0.4$$



Twenty-seven hundredths

$$\frac{27}{100} = 0.27$$



Read each place from left to right.

BUILD A DECIMAL

Place-value mat

ONES

TENTHS

HUNDREDTHS

1. Choose cards.

2. Build the number.

3. Read it aloud.

BUILD A DECIMAL

Digit and challenge cards

0

1

2

3

4

5

6

7

8

9

0

1

2

3

4

5

6

7

8

9

.

.

Make a
number
greater
than 1.

Make a
number
less than 1.

Make a
number with
6 hundredths.

Make a
number
between 2.3
and 2.4.

DECIMAL MATCH-UP

Card Set A

0.3

$\frac{3}{10}$

three
tenths

3×0.1

0.07

$\frac{7}{100}$

seven
hundredths

7×0.01

0.24

$\frac{24}{100}$

twenty-four
hundredths

(2×0.1)
+
 (4×0.01)

1.5

$1\frac{5}{10}$

one and
five tenths

$1 + (5 \times 0.1)$



DECIMAL MATCH-UP



Card Set B

2.37

$1 \frac{9}{100}$

eight
tenths

$\frac{45}{100}$

$(4 \times 0.1) +$
 (5×0.01)

0.45

$1 + (9 \times 0.01)$

0.8

$2 \frac{37}{100}$

two and
thirty-seven
hundredths

$\frac{8}{10}$

1.09

one and
nine
hundredths

8×0.1

$2 + (3 \times 0.1)$
 $+ (7 \times 0.01)$

forty-five
hundredths

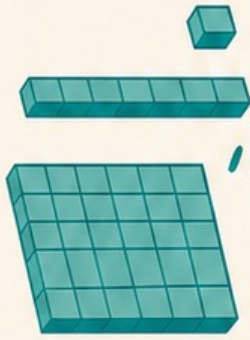
DECIMAL MATCH-UP

Recording Sheet

Name: _____

Find four cards that show the same decimal. Record each matched set.

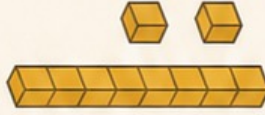
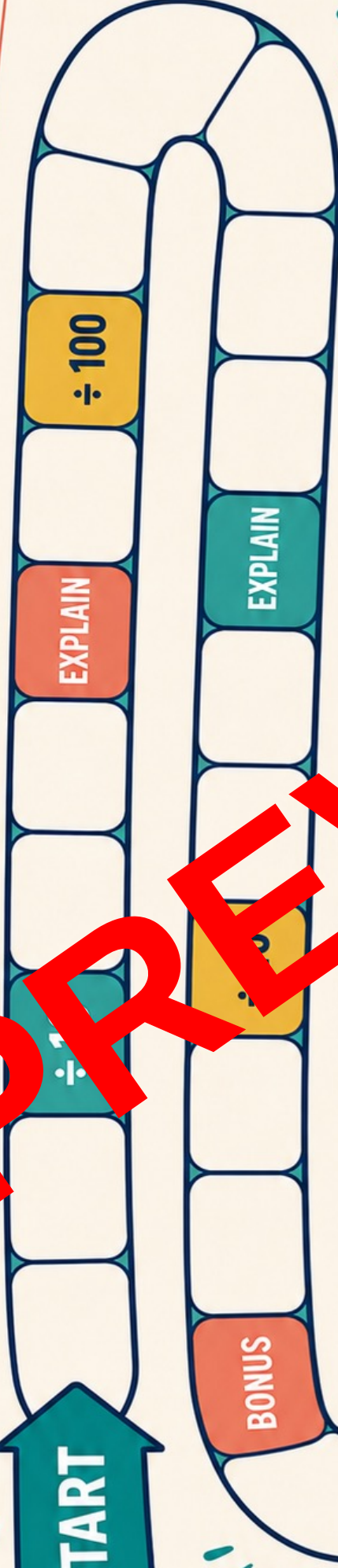
	DECIMAL	FRACTION	WORDS	EXPANDED FORM
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				



POWER-OF-TEN TRAIL

o	t	h
●	●●	●●●

Divide by 10 and 100



Roll. Move. Draw a card. Solve and record.

PREVIEW

POWER-OF-TEN TRAIL

Challenge Cards

$$40 \div 10$$

$$70 \div 10$$

$$120 \div 10$$

$$350 \div 10$$

$$6 \div 10$$

$$9 \div 10$$

$$25 \div 10$$

$$480 \div 10$$

$$300 \div 100$$

$$900 \div 100$$

$$1200 \div 100$$

$$4500 \div 100$$

$$7 \div 100$$

$$35 \div 100$$

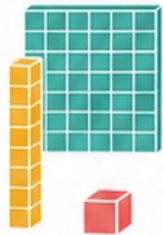
$$240 \div 100$$

$$805 \div 100$$



POWER-OF-TEN TRAIL

..... Recording Sheet



Name _____

Solve each card. Record the equation, answer and place-value movement.

CARD	EQUATION	ANSWER	HOW DID THE DIGITS MOVE?
1			
2			
3			
4			
5			
6			
7			
8			

PREVIEW



$\div 10$: one place right $\div 100$: two places right >>>

TENTHS AND HUNDREDTHS

Models • Page 1

Name: _____

A. Shade and write

Shade each ten-part bar. Then write the decimal.

1. $6/10 =$ _____

--	--	--	--	--	--	--	--	--	--

2. $3/10 =$ _____

--	--	--	--	--	--	--	--	--	--

3. $9/10 =$ _____

--	--	--	--	--	--	--	--	--	--

B. Represent each number

Write each number as a fraction and a decimal.

4. five tenths

Fraction: _____ Decimal: _____

5. two tenths

Fraction: _____ Decimal: _____

6. eight tenths

Fraction: _____ Decimal: _____

TENTHS AND HUNDREDTHS

Models • Page 1

Name: ANSWERS

A. Shade and write

Shade each ten-part bar. Then write the decimal.

1. $6/10 =$ 0.6



2. $3/10 =$ 0.3



3. $9/10 =$ 0.9



B. Represent each number

Write each number as a fraction and a decimal.

4. five tenths

Fraction: 5/10 Decimal: 0.5

5. two tenths

Fraction: 2/10 Decimal: 0.2

6. eight tenths

Fraction: 8/10 Decimal: 0.8

TENTHS AND HUNDREDTHS

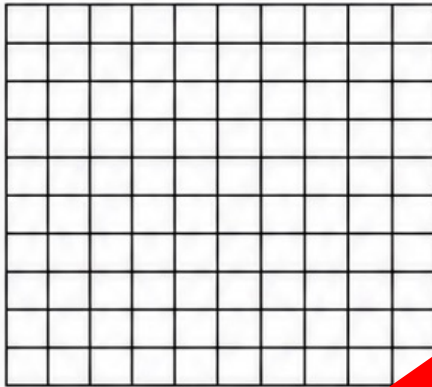
Models • Page 2

Name: _____

A. Shade and write

Shade each hundred grid. Then write the decimal.

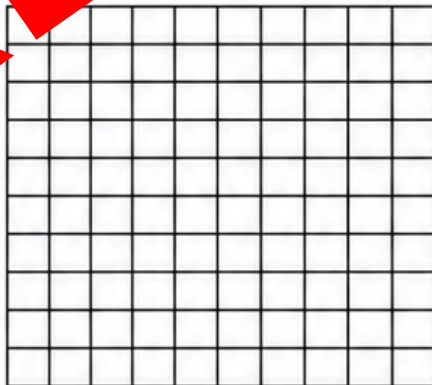
1. $23/100 =$ _____



2. $8/100 =$ _____



3. $67/100 =$ _____



B. Think about place value

4. Write 1 and 34 hundredths as a decimal. _____

5. Write 2.05 in words. _____

6. Which digit is in the hundredths place in 4.79? _____

TENTHS AND HUNDREDTHS

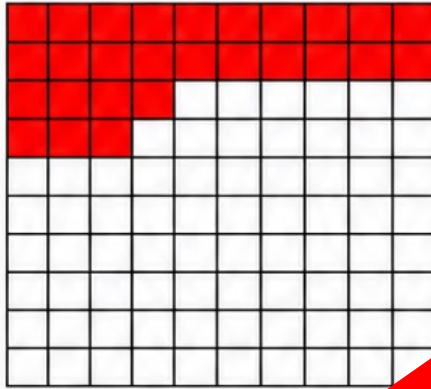
Models • Page 2

Name: ANSWERS

A. Shade and write

Shade each hundred grid. Then write the decimal.

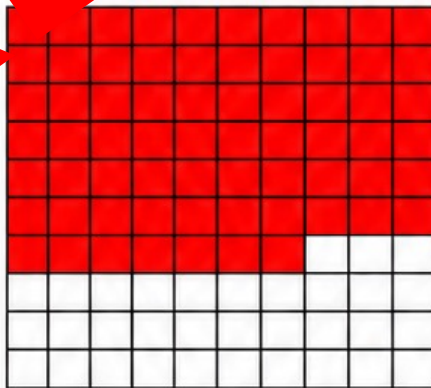
1. $23/100 =$ 0.23



2. $8/100 =$ 0.08



3. $67/100 =$ 0.67



B. Think about place value

4. Write 1 and 34 hundredths as a decimal. 1.34

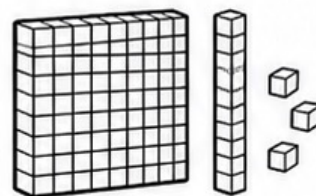
5. Write 2.05 in words. two and five hundredths

6. Which digit is in the hundredths place in 4.79? 9

PLACE VALUE AND EXPANDED FORM

Page 1 • Digit value

Name: _____



A. Complete the table

	NUMBER	DIGIT	PLACE	VALUE
1.	4.73	7		
2.	6.08	8		
3.	2.45	4		
4.	9.31	1		

B. What is the digit worth?

5. What is the value of the 6 in 6.04? _____

6. What is the value of the 9 in 7.09? _____

7. What is the value of the 2 in 2.18? _____

C. Equivalent or not?

Circle **YES** if the decimals are equivalent. Circle **NO** if they are not.

8. 0.6 and 0.60 YES NO

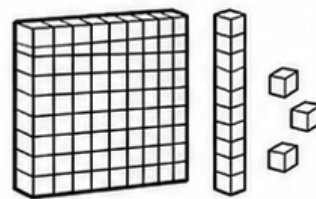
9. 3.04 and 3.4 YES NO

10. 1.20 and 1.2 YES NO

PLACE VALUE AND EXPANDED FORM

Page 1 • Digit value

Name: **ANSWERS**



A. Complete the table

	NUMBER	DIGIT	PLACE	VALUE
1.	4.73	7	tenths	0.7
2.	6.08	8	hundredths	0.08
3.	2.45	4	tenths	0.4
4.	9.31	1	hundredths	0.01

B. What is the digit worth?

5. What is the value of the 6 in 6.04? 0.6
6. What is the value of the 9 in 7.09? 0.09
7. What is the value of the 2 in 2.18? 2

C. Equivalent or not?

Circle YES if the decimals are equivalent. Circle NO if they are not.

8. 0.6 and 0.60 YES NO
9. 3.04 and 3.4 YES NO
10. 1.20 and 1.2 YES NO

PLACE VALUE AND EXPANDED FORM

Page 2 • Representations

Name: _____

	.		
--	---	--	--

_____→

A. Complete the expanded form

1. $3.47 = 3 + (4 \times 0.1) + (___ \times 0.01)$
2. $5.09 = 5 + (___ \times 0.1) + (9 \times 0.01)$
3. $0.82 = (___ \times 0.1) + (___ \times 0.01)$
4. $6.30 = 6 + (___ \times 0.1) + (___ \times 0.01)$

B. Write the decimal

5. $2 + (5 \times 0.1) + (7 \times 0.01) = ______$
6. $8 + (2 \times 0.1) = ______$
7. $(9 \times 0.1) + (4 \times 0.01) = ______$
8. $4 + (1 \times 0.1) = ______$

C. Words and decimals

9. Write 7.26 in words. _____
10. Write three and eight hundredths as a decimal. _____

PLACE VALUE AND EXPANDED FORM

Page 2 • Representations

Name: ANSWERS

	.		
--	---	--	--

→

A. Complete the expanded form

1. $3.47 = 3 + (4 \times 0.1) + (\underline{7} \times 0.01)$

2. $5.09 = 5 + (\underline{0} \times 0.1) + (9 \times 0.01)$

3. $0.82 = (\underline{8} \times 0.1) + (\underline{2} \times 0.01)$

4. $6.30 = 6 + (\underline{3} \times 0.1) + (\underline{0} \times 0.01)$

B. Write the decimal

5. $2 + (5 \times 0.1) + (7 \times 0.01) = \underline{2.57}$

6. $8 + (0 \times 0.1) + (3 \times 0.01) = \underline{8.03}$

7. $(9 \times 0.1) + (4 \times 0.01) = \underline{0.94}$

8. $4 + (1 \times 0.1) = \underline{4.1}$

C. Words and decimals

9. Write 7.26 in words. seven and twenty-six hundredths

10. Write three and eight hundredths as a decimal. 3.08

COMPARE AND ORDER DECIMALS

Page 1 • Compare

Name: _____

A. Write $<$, $>$ or $=$

1. 0.4 _____ 0.39
2. 0.62 _____ 0.7
3. 1.05 _____ 1.5
4. 2.30 _____ 2.3
5. 0.08 _____ 0.8
6. 3.47 _____ 3.44



B. Explain your thinking

7. Mia says $0.56 > 0.6$ because 56 > 6. Is she correct? Explain.

8. Which is closer to 1: 0.91 or 1.08? Explain.

C. Find a number between

9. Write one decimal between 0.4 and 0.5. _____
10. Write one decimal between 2.16 and 2.18. _____

COMPARE AND ORDER DECIMALS

Page 1 • Compare

Name: ANSWERS

A. Write $<$, $>$ or $=$

1. 0.4 $>$ 0.39

2. 0.62 $<$ 0.7

3. 1.05 $<$ 1.5

4. 2.30 $=$ 2.3

5. 0.08 $<$ 0.8

6. 3.47 $>$ 3.44



B. Explain your thinking

7. Mia says $0.56 > 0.6$ because $56 > 6$. Is she correct? Explain.

No. $0.56 < 0.60$ because five tenths is less than six tenths.

8. Which is closer to 1: 0.91 or 1.08 ? Explain.

1.08 is closer. It is 0.08 from 1; 0.91 is 0.09 from 1.

C. Find a number between

9. Write one decimal between 0.4 and 0.5 . 0.45

10. Write one decimal between 2.16 and 2.18 . 2.17

COMPARE AND ORDER DECIMALS

Page 2 • Order and locate

Name _____

A. Least to greatest

Rewrite each set from least to greatest.

1. 0.4, 0.04, 0.44 _____
2. 1.2, 1.02, 1.20 _____
3. 2.75, 2.57, 2.07, 2.7 _____
4. 0.09, 0.9, 0.19, 0.91 _____

B. Greatest to least

5. 3.4, 3.04, 3.44 _____
6. 1.09, 1.9, 1.09 _____

C. Decimal challenges

7. Write a decimal between 0.6 and 0.7. _____
8. Write a decimal between 1.24 and 1.26. _____
9. Use 0, 2 and 5 once each to make the greatest decimal less than 1. _____
10. Order 0.5, 0.05 and 0.50. Then explain which are equivalent.

COMPARE AND ORDER DECIMALS

Page 2 • Order and locate

Name **ANSWERS**

A. Least to greatest

Rewrite each set from least to greatest.

1. 0.4, 0.04, 0.44 0.04, 0.4, 0.44

2. 1.2, 1.02, 1.20 1.02, 1.2, 1.20

3. 2.75, 2.57, 2.07, 2.7 2.07, 2.57, 2.7, 2.75

4. 0.09, 0.9, 0.19, 0.91 0.09, 0.19, 0.9, 0.91

B. Greatest to least

5. 3.4, 3.04, 3.44 3.44, 3.4, 3.04

6. 1.09, 1.9, 1.19 1.9, 1.19, 1.09

C. Decimal challenges

7. Write a decimal between 0.6 and 0.7. 0.65

8. Write a decimal between 1.24 and 1.26. 1.25

9. Use 0, 2 and 5 once each to make the greatest decimal less than 1. 0.52

10. Order 0.5, 0.05 and 0.50. Then explain which are equivalent.

0.05, 0.5, 0.50. The decimals 0.5 and 0.50 are equivalent.

DIVIDE BY 10

Each digit moves one place right

Name: _____

HUNDREDS	TENS	ONES	TENTHS	HUNDREDTHS



A. Calculate

1. $60 \div 10 =$ _____

2. $430 \div 10 =$ _____

3. $8 \div 10 =$ _____

4. $75 \div 10 =$ _____

5. $906 \div 10 =$ _____

6. $1200 \div 10 =$ _____

B. Follow the pattern

7. $300 \div 10 =$ _____; then $\div 10 =$ _____; then $\div 10 =$ _____

8. $340 \div 10 =$ _____; then $\div 10 =$ _____

C. Reason about place value

9. Why is $6 \div 10$ equal to 0.6, not 6.0?

10. Circle the correct answer: $250 \div 10 =$ 25 2.5

DIVIDE BY 10

Each digit moves one place right

Name: ANSWERS

HUNDREDS	TENS	ONES	TENTHS	HUNDREDTHS



A. Calculate

1. $60 \div 10 = \underline{6}$

2. $430 \div 10 = \underline{43}$

3. $8 \div 10 = \underline{0.8}$

4. $75 \div 10 = \underline{7.5}$

5. $906 \div 10 = \underline{90.6}$

6. $1200 \div 10 = \underline{120}$

B. Follow the pattern

7. $50 \div 10 = \underline{5}$; then $\div 10 = \underline{0.5}$; then $\div 10 = \underline{0.05}$

8. $34 \div 10 = \underline{3.4}$; then $\div 10 = \underline{0.34}$

C. Reason about place value

9. Why is $6 \div 10$ equal to 0.6, not 6.0?

Dividing by 10 makes each digit one tenth its value, so 6 ones becomes 6 tenths.

10. Circle the correct answer: $250 \div 10 =$ 25 2.5

DIVIDE BY 100

Each digit moves two places right

Name: _____

HUNDREDS	TENS	ONES	TENTHS	HUNDREDTHS



A. Calculate

1. $300 \div 100 =$ _____
2. $4500 \div 100 =$ _____
3. $7 \div 100 =$ _____
4. $36 \div 100 =$ _____
5. $805 \div 100 =$ _____
6. $1200 \div 100 =$ _____

B. Divide by 100 via

7. $840 \div 10 =$ _____; then $\div 10 =$ _____; so $840 \div 100 =$ _____
8. $9 \div 10 =$ _____; then $\div 10 =$ _____; so $9 \div 100 =$ _____

C. Reason about place value

9. When a whole number is divided by 100, how do the digit positions change?

10. Circle the correct answer: $640 \div 100 =$ 64 6.4 0.64

DIVIDE BY 100

Each digit moves two places right

Name: **ANSWERS**

HUNDREDS	TENS	ONES	TENTHS	HUNDREDTHS

A. Calculate

1. $300 \div 100 = \underline{3}$

2. $4500 \div 100 = \underline{45}$

3. $7 \div 100 = \underline{0.07}$

4. $36 \div 100 = \underline{0.36}$

5. $805 \div 100 = \underline{8.05}$

6. $1200 \div 100 = \underline{12}$

B. Divide by 100 via

7. $84 \div 10 = \underline{8.4}$; then $\div 10 = \underline{8.4}$; so $840 \div 100 = \underline{8.4}$

8. $9 \div 10 = \underline{0.9}$; then $\div 10 = \underline{0.09}$; so $9 \div 100 = \underline{0.09}$

C. Reason about place value

9. When a whole number is divided by 100, how do the digit positions change?

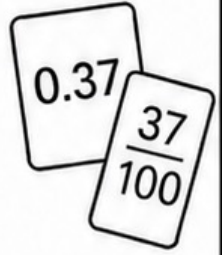
Each digit moves two places right, so its value becomes one hundredth as much.

10. Circle the correct answer: $640 \div 100 =$ 64 6.4 0.64



DECIMAL REASONING CHALLENGE

Page 1 • Explain and correct



Name: _____

1. Kai says 0.37 means thirty-seven tenths. What is his error?
Rewrite it correctly.



2. True or false: 0.5 and 0.50 have the same value.
Prove your answer using place value.

Ones	Tenths	Hundredths
0	.	

3. A decimal has 4 tenths and 1 hundredth.
Write the decimal and its expanded form.

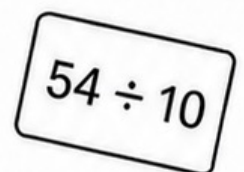


Decimal: _____ Expanded form: _____

4. Which does not belong: 0.8 , $\frac{8}{10}$, $\frac{80}{100}$, 0.08 ? Explain.

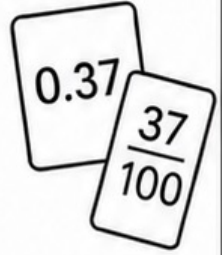


5. Rina divides 54 by 10 and writes 0.54.
Correct her result and explain the place-value change.





DECIMAL REASONING CHALLENGE



Page 1 • Explain and correct

Name: _____ **ANSWERS**

1. Kai says 0.37 means thirty-seven tenths. What is his error?
Rewrite it correctly.

0.37 is thirty-seven hundredths: 3 tenths and 7 hundredths.



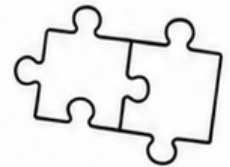
2. True or false: 0.5 and 0.50 have the same value.
Prove your answer using place value.

Ones	Tenths	Hundredths
0	.	

True. 0.5 is 5 tenths and 0.50 is 50 hundredths; they have the same value.

3. A decimal has 4 tenths and 7 hundredths.
Write the decimal and its expanded form.

Decimal: 0.47 Expanded form: **$(4 \times 0.1) + (7 \times 0.01)$**



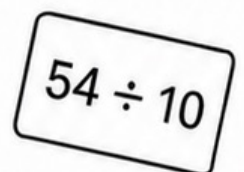
4. Which does not belong: 0.8, $\frac{8}{10}$, $\frac{80}{100}$, 0.08? Explain.

0.08 does not belong. The other three are equivalent to 0.8.



5. Rina divides 54 by 10 and writes 0.54.
Correct her result and explain the place-value change.

$54 \div 10 = 5.4$. Each digit moves one place right.





DECIMAL REASONING CHALLENGE

Page 2 • Create and justify



Name: _____

1. Write three different decimals between 0.2 and 0.3.

a. _____

b. _____

c. _____

2. Use the digits 1, 4 and 7 once each to make the greatest decimal less than 1. _____

3. Write 0.6 in hundredths. _____

4. Create a whole number that gives 3.25 when divided by 100. _____

5. Fill the box: $2.4\boxed{}$ is greater than 2.45 and less than 2.50. List every possible digit.

6. Explain why 0.99 is less than 1 even though 99 is greater than 1.



DECIMAL REASONING CHALLENGE

Page 2 • Create and justify



Name: ANSWERS

1. Write three different decimals between 0.2 and 0.3.

a. 0.21

b. 0.25

c. 0.29

2. Use the digits 1, 4 and 7 once each to make the greatest decimal less than 1. 0.74

The ones digit must be 1; then 7 tenths and 4 hundredths
make the greatest value.

3. Write 0.6 in hundredths. 0.60

4. Create a whole number that gives 3.25 when divided by 100. 325

$325 \div 100 = 3.25$

5. Fill the box: $2.4\boxed{}$ is greater than 2.45 and less than 2.50. List every possible digit.

6, 7, 8 and 9

6. Explain why 0.99 is less than 1 even though 99 is greater than 1.

0.99 is 99 hundredths, while 1 whole is 100 hundredths.

DECIMAL PLACE VALUE ASSESSMENT

Page 1 • Garden measurements

Name: _____ Date: _____

The Year 4 garden club measured seedlings and planned garden beds. Use decimal place value to solve the tasks.

1. A seedling is 0.46 m high.

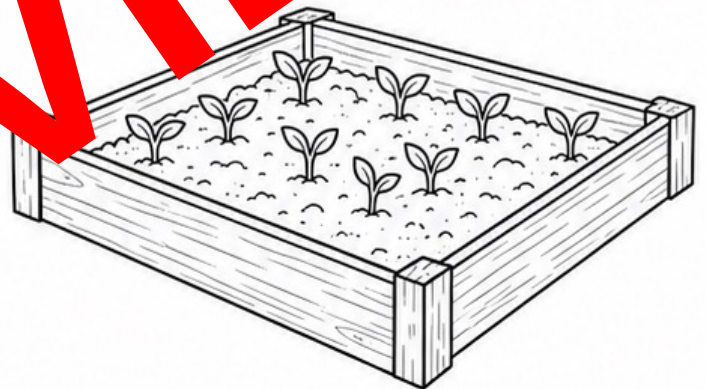
What is the value of the 4? _____

What is the value of the 6? _____

2. Write 0.46 as hundredths and in expanded form.

Fraction: _____ Expanded form: _____

3. Shade 46/100 on the hundred grid.



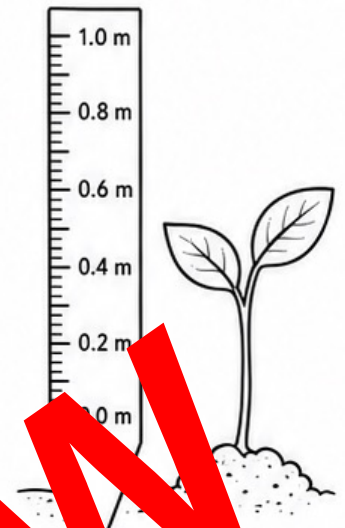
4. A garden bed is seven tenths of a metre wide.

Decimal: _____ Fraction: _____

5. Write $<$, $>$ or $=$: 0.58 m _____ 0.6 m

6. Order from least to greatest: 0.45, 0.54, 0.40

7. Are 0.70 and 0.7 equivalent? Explain using place value.



DECIMAL PLACE VALUE ASSESSMENT

Page 1 • Garden measurements

ANSWERS _____ Date: _____

The Year 4 garden club measured seedlings and planned garden beds. Use decimal place value to solve the tasks.

1. A seedling is 0.46 m high.

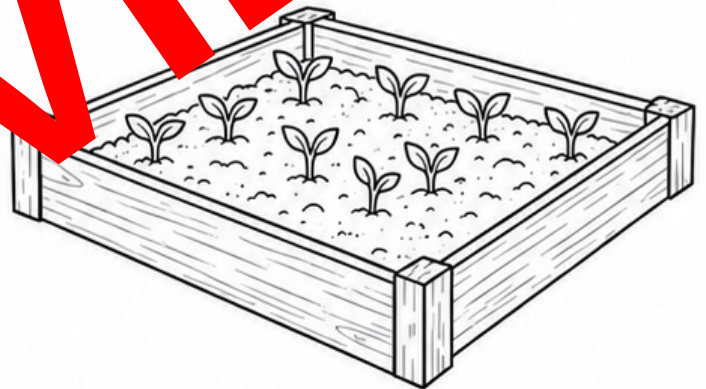
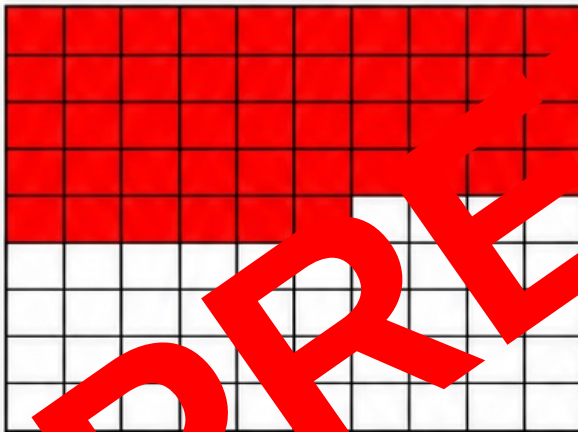
What is the value of the 4? 0.4

What is the value of the 6? 0.06

2. Write 0.46 as hundredths and in expanded form.

Fraction: 46/100 Expanded form: $(4 \times 0.1) + (6 \times 0.01)$

3. Shade 46/100 on the hundred grid.



4. A garden bed is seven tenths of a metre wide.

Decimal: 0.7 Fraction: 7/10

5. Write $<$, $>$ or $=$: 0.58 m $<$ 0.6 m

6. Order from least to greatest: 0.45, 0.54, 0.40

0.40, 0.45, 0.54

7. Are 0.70 and 0.7 equivalent? Explain using place value.

Yes. 0.7 is 7 tenths and 0.70 is 70 hundredths; they are equivalent.



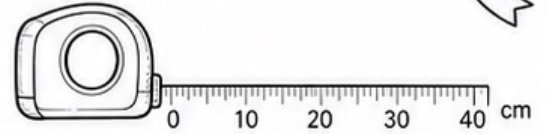
DECIMAL PLACE VALUE ASSESSMENT

Page 2 • Garden calculations



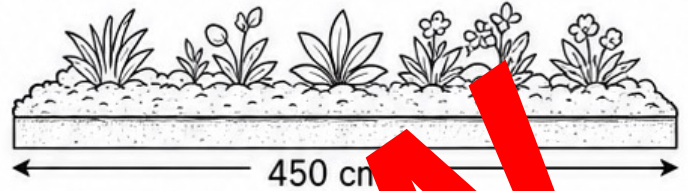
Name: _____ Date: _____

1. A 36 cm ribbon is shared into 10 equal lengths. $36 \div 10 =$ _____ cm



2. A 450 cm garden strip is scaled by 100.

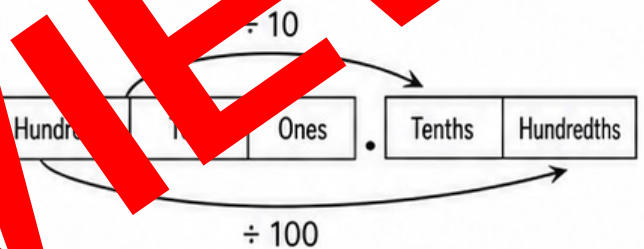
$$450 \div 100 = \text{_____ cm}$$



3. Calculate: $7 \div 100 =$ _____

4. Complete the table

START	$\div 10$	$\div 100$
80		
250		
600		



5. Which is greater: 0.5 or 0.05? Explain.



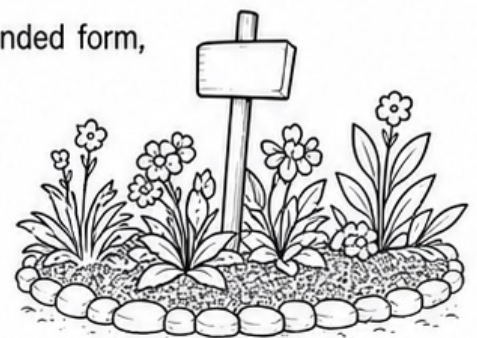
6. Jordan says $805 \div 100 = 0.805$. Correct the answer and explain the place-value movement.



7. Create a decimal between 1.2 and 1.3. Write it in words and expanded form, then compare it with 1.25.

Decimal: _____ Words: _____

Expanded form: _____





DECIMAL PLACE VALUE ASSESSMENT

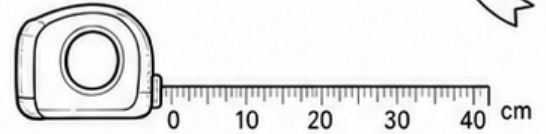
Page 2 • Garden calculations



Name: **ANSWERS**

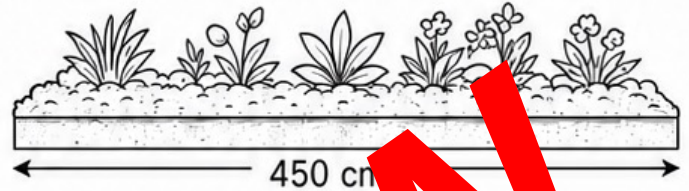
Date: _____

1. A 36 cm ribbon is shared into 10 equal lengths. $36 \div 10 =$ **3.6** cm



2. A 450 cm garden strip is scaled by 100.

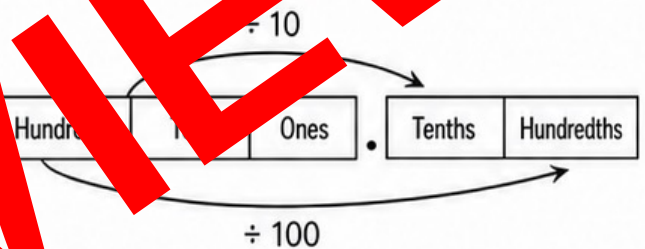
$$450 \div 100 = \text{4.5 cm}$$



3. Calculate: $7 \div 100 =$ **0.07**

4. Complete the table

START	$\div 10$	$\div 100$
80	8	0.8
250	25	2.5
600	60	6



5. Which is greater: 0.4 m or 0.40 m? Explain.

0.4 m is greater because $40 > 4$.



6. Jordan says $805 \div 100 = 0.805$. Correct the answer and explain the place-value movement.

$805 \div 100 = 8.05$. Each digit moves two places right.

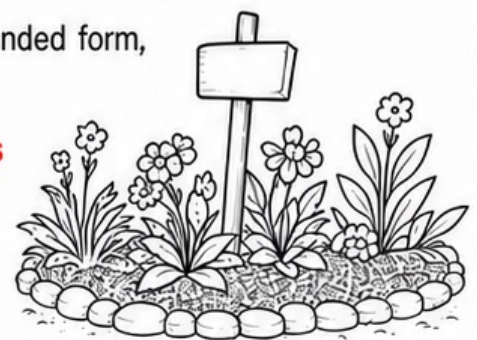


7. Create a decimal between 1.2 and 1.3. Write it in words and expanded form, then compare it with 1.25.

Decimal: **1.27** Words: **one and twenty-seven hundredths**

Expanded form: **$1 + (2 \times 0.1) + (7 \times 0.01)$**

$1.27 > 1.25$



Ones			
•			
Tenths			
Hundredths			

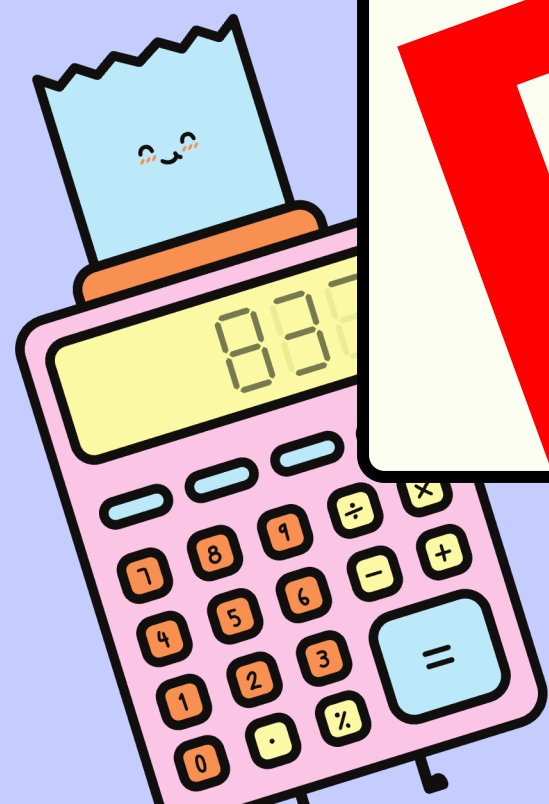
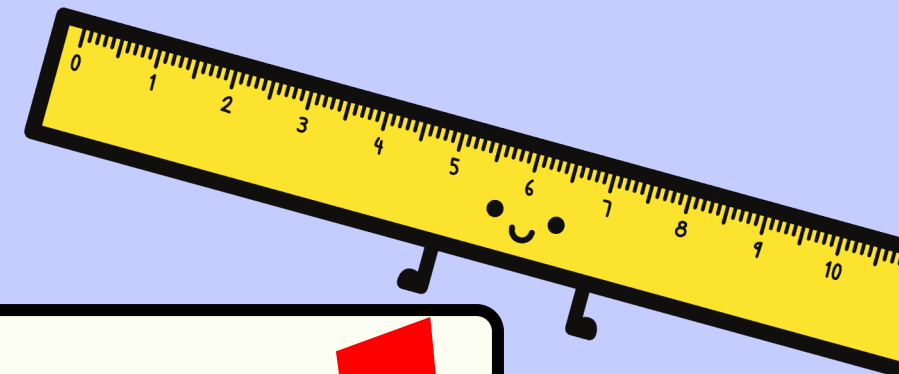
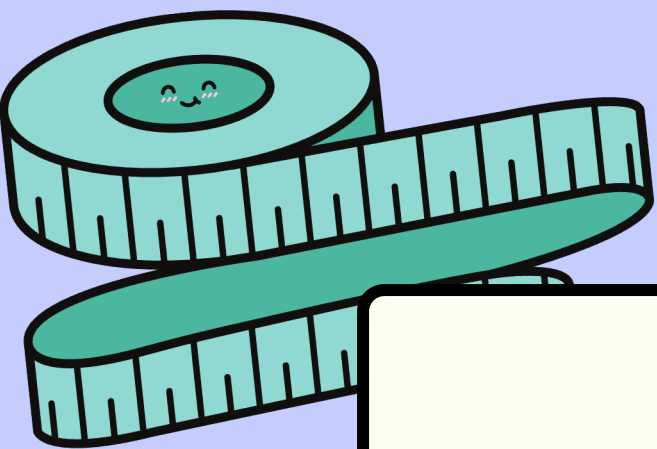
PLACE VALUE AFTER THE DECIMAL RUBRIC

Student: _____

Date: _____

CRITERIA	BEGINNING	DEVELOPING	ACHIEVING	CONFIDENT	EXCEEDING
Represents decimals	Needs support with tenths and hundredths	Represents tenths with prompts	Accurately represents tenths and hundredths	Connects several representations independently	Explains equivalence across representations
Place value	Needs support to identify place	Identifies some place values	Identifies digit place and value accurately	Uses zeros and equivalence accurately	Generalises place-value patterns
Compares and orders	Needs support comparing decimals	Compares simple pairs with prompts	Compares and orders to hundredths accurately	Justifies comparisons using place value	Creates and analyses decimal constraints
Divides by 10 and 100	Needs support with division	Calculates familiar examples with prompts	Divides by 10 and 100 accurately	Explains digit movement accurately	Applies patterns flexibly and explains
Reasoning and communication	Records incomplete reasoning	Gives a partial explanation	Shows clear working and reasoning	Justifies strategies using maths language	Makes precise connected generalisations

Ones			
•			
Tenths			
Hundredths			



PREVIEW

Place Value
After
the Decimal

A cartoon character with a white body, a blue graduation cap with a gold tassel, and a blue backpack. It is holding a yellow pencil with a pink eraser.

Learning Goals

We are learning to:

- read and represent tenths and hundredths
- identify the value of each digit
- compare and order decimals
- divide whole numbers by one and two-digit numbers

Success looks like: I can explain how each decimal digit gets its value.



Decimals in Everyday Life

Decimals help us describe parts of one whole.

- money: \$4.75
- length: 1.25 m
- mass: 0.6 kg
- sport: 9.84 s

The decimal places make each measurement more precise.



Whole and Fractional Parts

In 3.47:

3 is the whole-number part.

The decimal point separates the whole from the fractional part.

4 is four tenths.

7 is seven hundredths.

Read 3.47 as “three and four tenths seven hundredths.”



Place-Value Chart

HUNDREDS | TENS | ONES | TENTHS | HUNDREDTHS

0 0 2 4 7

$$2.47 = 2 + (4 \times 0.1) + (7 \times 0.01)$$

The first place after the decimal is tenths; the second is hundredths.



Tenths

One whole divided into 10 equal parts makes tenths.

1 tenth = $\frac{1}{10}$ = 0.1

4 tenths = $\frac{4}{10}$ = 0.4

9 tenths = $\frac{9}{10}$ = 0.9

The tenths digit tells how many one-tenth parts there are.



Hundredths

One whole divided into 100 equal parts makes hundredths.

1 hundredth = $1/100 = 0.01$

8 hundredths = $8/100 = 0.08$

37 hundredths = $37/100 = 0.37$

A zero may be needed as a placeholder.



Equivalent Representations

Decimal: 0.46

Fraction: $\frac{46}{100}$

Words: forty-six hundredths

Expanded form: $(4 \times 0.1) + (6 \times 0.01)$

Each term describes the value

PREVIEW



Try It: Tenths

Write each fraction as a decimal.

1. $\frac{3}{10} = ?$

2. $\frac{7}{10} = ?$

3. $\frac{9}{10} = ?$

Explain in words the tenths digit in each answer.



Tenths Answers

1. $3/10 = 0.3$

2. $7/10 = 0.7$

3. $9/10 = 0.9$

In 0.7, the 7 means seven tenths.

PREVIEW



Try It: Hundredths

Write each fraction as a decimal.

1. $\frac{6}{100} = ?$

2. $\frac{24}{100} = ?$

3. 1 and $\frac{5}{100} = ?$

Remember to use zeros in the hundredths place when needed.



Hundredths Answers

1. $6/100 = 0.06$

2. $24/100 = 0.24$

3. 1 and $5/100 = 1.05$

The hundredths digit is always the second digit after decimal.



What Is the Digit Worth?

The value depends on the digit's place.

In 5.28:

- 5 has value 5 ones
- 2 has value 0.2
- 8 has value 0.08

A digit can have different values in different places.



Zeros Are Important

0.6 and 0.60 are equivalent.

0.6 = six tenths

0.60 = sixty hundredths

But 3.0 is not equal to 3.4

The zero in 3.0 holds the tenths place.



Compare by Place Value

Compare from left to right.

0.39 and 0.4

$0.4 = 0.40$

Tenths: $3 < 4$, so $0.39 < 0.40$

Or move to hundredths where the tenths digits are equal.



Try It: Compare and Order

1. Insert $<$, $>$ or $=$: 0.62 ____ 0.7
2. Insert $<$, $>$ or $=$: 2.30 ____ 2.3
3. Order least to greatest: 0.09 , 0.9 , 0.10
4. Write a decimal between 1.24 and 1.26 .

PREVIEW



Compare and Order Answers

1. $0.62 < 0.7$

2. $2.30 = 2.3$

3. $0.09, 0.19, 0.9$

4. Sample answer: 1.25

Align decimal places before comparing



Divide by 10

Dividing by 10 makes every digit one tenth of its previous value.

Each digit moves one place to the right and a place-value character

$$6 \div 10 = 0.6$$

47



Divide by 10: Examples

$$430 \div 10 = 43$$

$$75 \div 10 = 7.5$$

$$8 \div 10 = 0.8$$

$$906 \div 10 = 90.6$$

The decimal point moves one place to the left while the digits change place.



Try It: Divide by 10

1. $60 \div 10 = ?$

2. $350 \div 10 = ?$

3. $9 \div 10 = ?$

4. $25 \div 10 = ?$

Describe the place value change



Divide by 10 Answers

1. 6

2. 35

3. 0.9

4. 2.5

Each digit moved one place to the right



Divide by 100

Dividing by 100 makes every digit one hundredth of its previous value.

Each digit moves two places to the right.

$$7 \div 100 = 0.07$$

$$305 \div 100 = 3.05$$



Divide by 100: Examples

$$900 \div 100 = 9$$

$$4500 \div 100 = 45$$

$$36 \div 100 = 0.36$$

$$805 \div 100 = 8.05$$

Zeroes may be needed to keep the decimal place



Try It: Divide by 100

1. $300 \div 100 = ?$

2. $1200 \div 100 = ?$

3. $35 \div 100 = ?$

4. $240 \div 100 = ?$

Example: $100 \div 100 = 1$



Divide by 100 Answers

1. 3

2. 12

3. 0.35

4. 2.4

7. 0.0007 7 hundredths, so 7 ÷ 100 = 0.07

PREVIEW



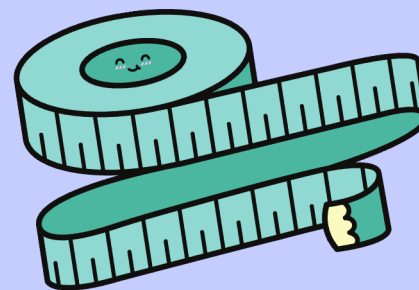
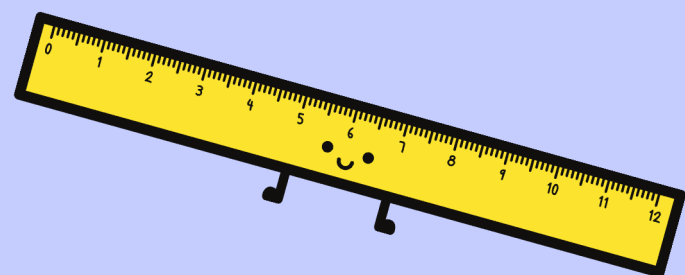
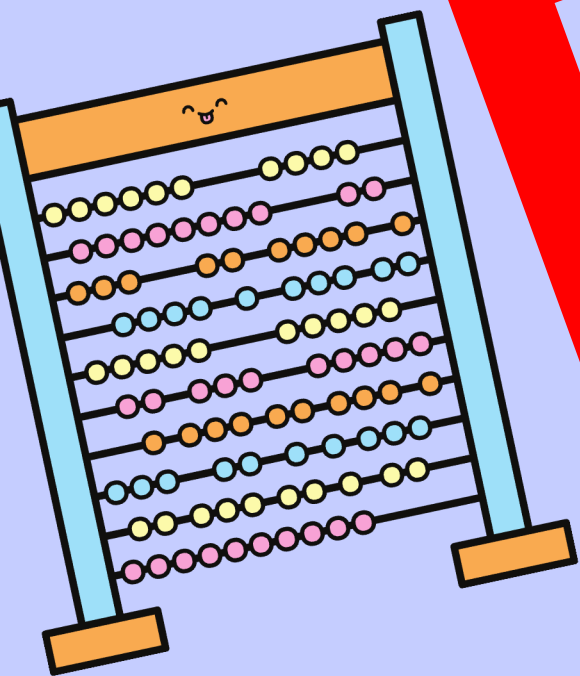
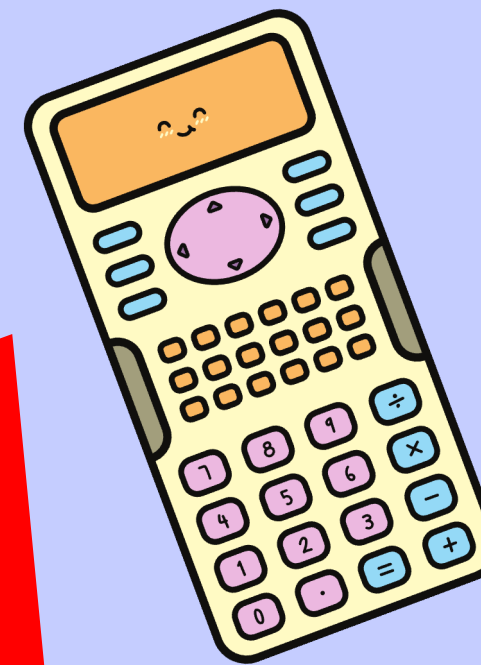
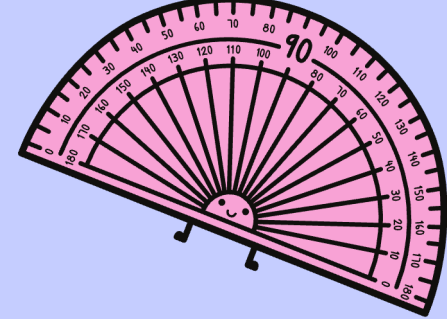
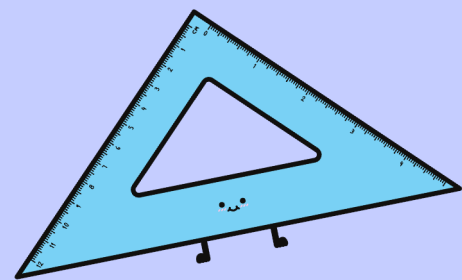
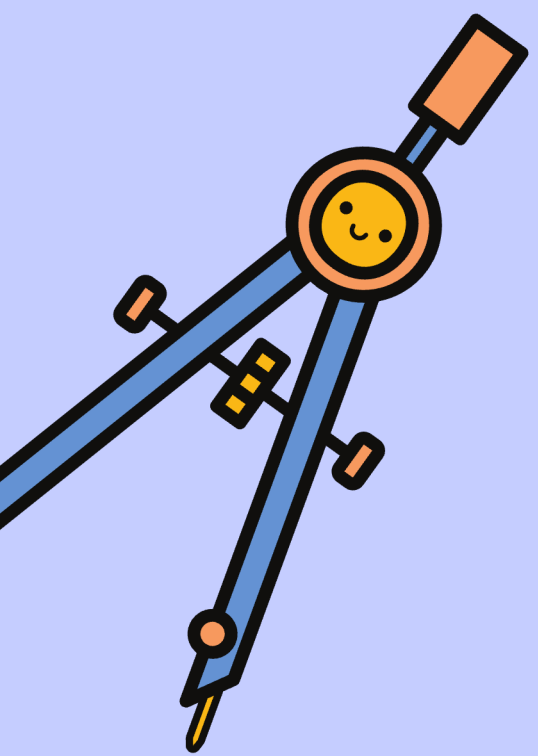
Review and Exit Check

Explain each answer using place value.

1. Write $\frac{4}{10}$ as a decimal.
2. What is the value of 8 in 2.83?
3. Compare 0.56 and 0.6.
4. Calculate $54 \div 10$.
5. Calculate $9 \div 100$.

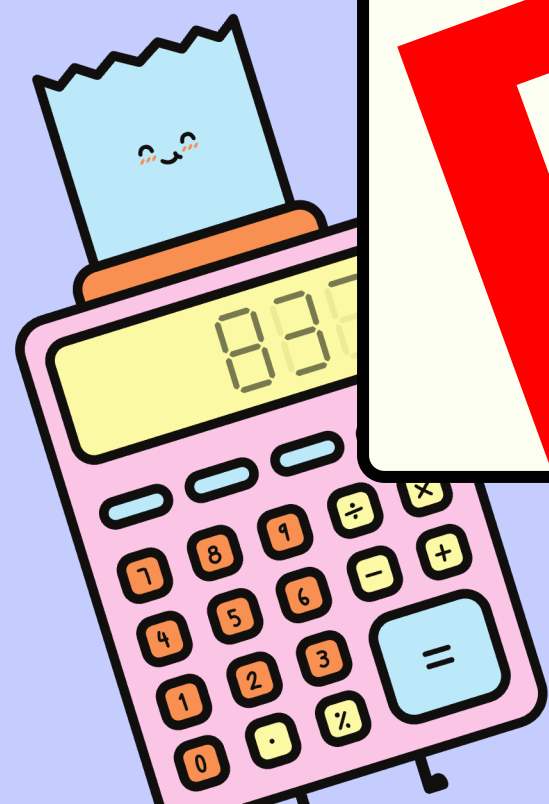
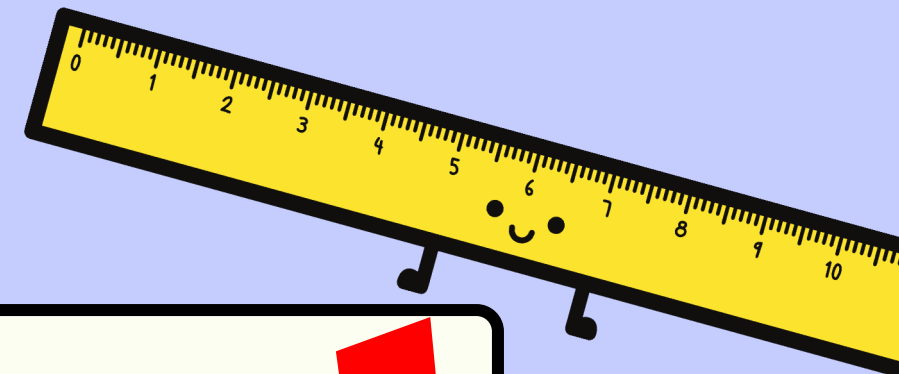
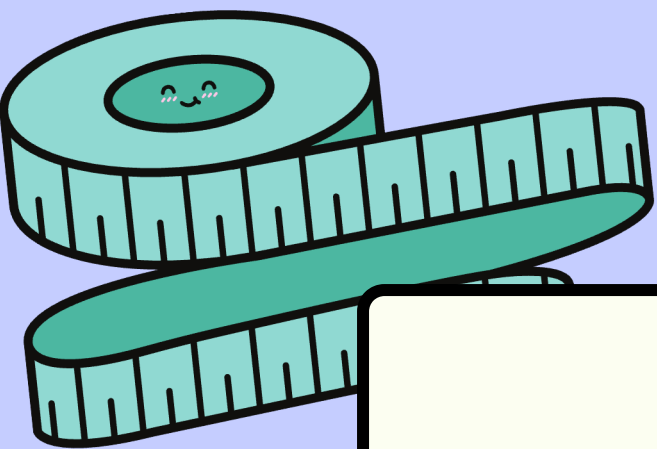
Check that every decimal point is in the correct place.





PREVIEW

Well Done



PREVIEW

Place Value
After
the Decimal Quiz



Question 1 · Multiple Choice

Which decimal represents six tenths?

A. 0.06

B. 0.6

C. 6.0

D. 6



Answer 1

B. 0.6

Six tenths = $6/10 = 0.6$.

PREVIEW



Question 2 · True or False

The value of 7 in 3.74 is seven tenths.

True or false?

PREVIEW



Answer 2

TRUE

The 7 is the first digit after the decimal point, so it is in the tenths place.

PREVIEW



Question 3 · Short Answer

Write forty-three hundredths as a decimal.

PREVIEW



Answer 3

0.43

Forty-three hundredths = $43/100 = 0.43$

PREVIEW



Question 4 · Multiple Choice

What is the value of the 2 in 5.28?

- A. 2 ones
- B. 2 tenths
- C. 2 hundredths
- D. 2 thousandths



Answer 4

B. 2 tenths

The 2 has value 0.2.

PREVIEW



Question 5 · True or False

0.6 and 0.60 are equivalent.

True or false?

PREVIEW



Answer 5

TRUE

Six tenths and sixty hundredths name the same value

PREVIEW



Question 6 · Short Answer

Calculate $47 \div 10$.

PREVIEW



Answer 6

4.7

Each digit moves one place to the right

PREVIEW



Question 7 · Multiple Choice

Calculate $305 \div 100$.

A. 30.5

B. 3.05

C. 0.305

D. 3050

PREVIEW



Answer 7

B. 3.05

Each digit moves two places to the right

PREVIEW



Question 8 · Short Answer

Insert $<$, $>$ or $=$ between 0.39 and 0.4.

PREVIEW



Answer 8

$$0.39 < 0.4$$

Write 0.4 as 0.40, then compare the tenths digits.

PREVIEW



Question 9 · True or False

The decimal 2.05 has five tenths.

True or false?

PREVIEW



Answer 9

FALSE

The 0 is in the tenths place. The 5 is in the hundredths place.

PREVIEW



Question 10 · Multiple Choice

Which decimal is between 1.2 and 1.3?

A. 1.02

B. 1.19

C. 1.25

D. 1

PREVIEW



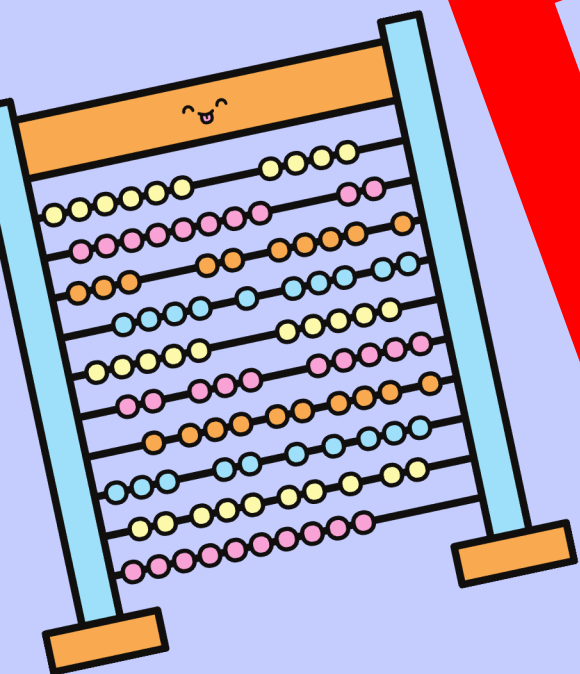
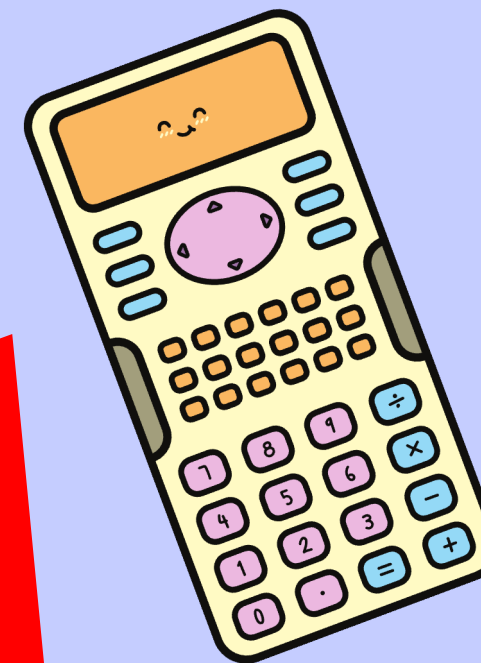
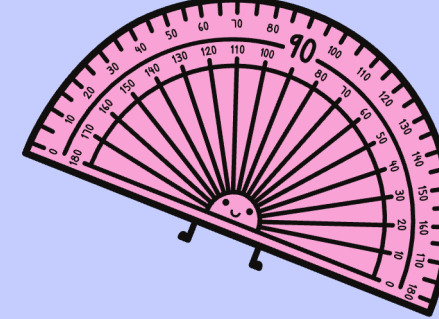
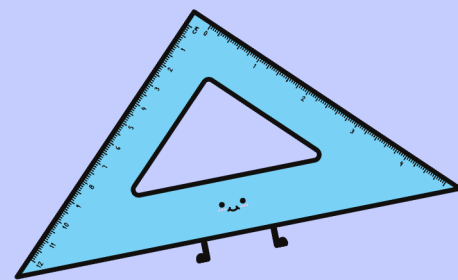
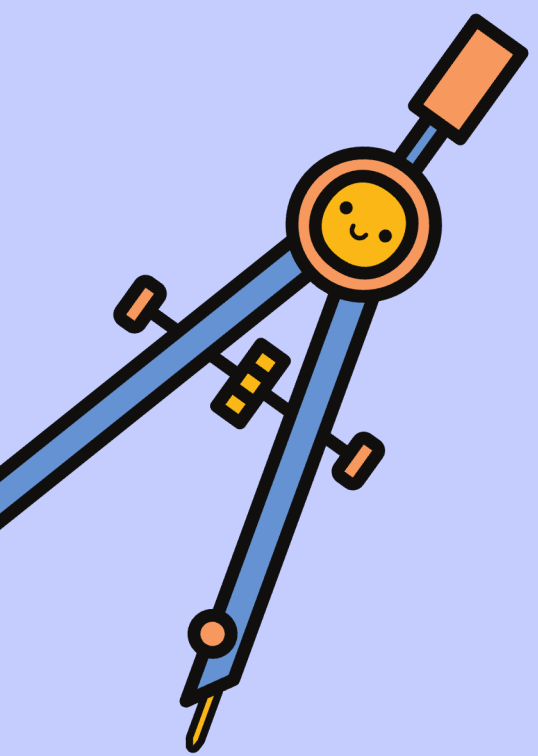
Answer 10

C. 1.25

$1.20 < 1.25 < 1.30$.

PREVIEW





PREVIEW

Well Done

