

Starter for 10

DAY 1

Record the value of the underlined digit in each of the following numbers.

1) 4,657,893

600,000

six hundred thousand

2) 1,607,355

3) 2,567,231

4) 7,258,904

5) 8,768,003

6) 3,005,127

DAY 1

1,506,364

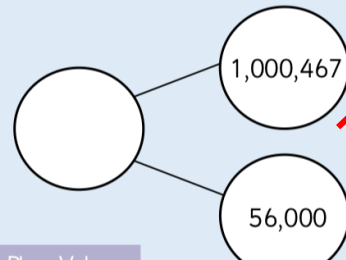
1,301,012

1,056,476

Match the representations to the numbers in digits.

one million, five hundred and six thousand, three hundred and sixty-four

M	HTh	TTh	Th	H	T	O
•	•••		•		•	••



1,056,467

1,301,012

1,506,364

1,509,664

Success Steps:

1. Identify the different values of each digit / value representation.
2. Match the representation with the number recorded in digits.
3. I will calculate the answer using my knowledge of place value.

Complete the missing numbers.

$$67,440 = \underline{60,000} + \underline{7,000} + \underline{440}$$

$$395,785 = \underline{300,000} + \underline{90,000} + \underline{5,000} + \underline{785}$$

$$42,550 = \underline{40,000} + \underline{2,000} + \underline{550}$$

ACTIVE LISTENING



Fluency

LO: To read numbers up to one million using place value.

DAY 1

Match the representations to the numbers in digits.

1,401,312

1,041,312

1,410,312

One million, four hundred and one thousand, three hundred and twelve.

M	HTh	TTh	Th	H	T	O
●		●●●●	●	●●●	●	●●

Complete the missing numbers.

$$6,305,400 = \underline{\hspace{2cm}} + 300,000 + \underline{\hspace{2cm}} + 40$$

$$7,001,001 = 7,000,000 + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$42,550 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + 50$$

JOB DONE



Independent Application

Match the representations to the numbers in digits.

8,000,092

4,467,312

4,100,412



Eight million and ninety-two

M	HTh	TTh	Th	H	T	O
●●●●	●			●●●●	●	●●

Match the representations to the numbers in digits.

One million, four hundred and one thousand,
three hundred and twelve.

M	HTh	TTh	Th	H	T	O
●		●●●●	●	●●●●	●	●●

1,401,312

1,041,312

1,410,312

DAY 1

Fluency

Complete the missing numbers.

$$5,204,500 = \underline{\hspace{2cm}} + 200,000 + \underline{\hspace{2cm}} + 500$$

$$8,789,200 = \underline{\hspace{2cm}} + 700,000 + \underline{\hspace{2cm}} + 200$$

$$2,307,900 = \underline{\hspace{2cm}} + 300,000 + \underline{\hspace{2cm}} + 900$$

Complete the missing numbers.

$$6,001,001 = 6,000,000 + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$3,007,064 = 3,000,000 + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$9,001,007 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + 7$$

Challenge

Leanna's number is 203,071. She adds 4,000 to her number.
What is her new number?



Zach's number is 306,042. He adds 5,000 to his number.
What is his new number?



DAY 1

Fluency



Complete the missing numbers.

$$6,305,400 = \underline{\hspace{2cm}} + 300,000 + \underline{\hspace{2cm}} + 400$$

$$7,001,001 = 7,000,000 + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$$

$$42,550 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + 50$$



Teddy's number is 306,042
He adds 5,000 to his number.
What is his new number?

Add 6 to the following numbers

24, 32, 45, 58, 68

Now add 7 to those numbers

Think about shortcuts!

Fluency

LO: To be able to add numbers that involve decimals.

DAY 2

$$234.3 + 12.61$$

$$123.11 + 432$$

$$11 + 1.001$$

	2	3	4	.	3	0
+	0	1	2	.	6	1
	2	4	6	.	9	1
	1	2	3	.	1	1
+	4	3	2	.	0	0
	5	5	5	.	1	1
	1	1	.	0	0	0
+	0	1	.	0	0	1
	1	2	.	0	0	1

SUCCESS STEPS

1. Write the decimals in a column.
2. If one of the addends has no decimal I know it comes after the ones column.
3. Write the digits for each addend in the correct column.
4. Add place holders to any empty columns in each addend
5. Add the columns, starting at the right.
6. If the answer is greater than 9 then write the ten in the next column
7. Continue adding all the columns to find the total.
8. The total is larger than the two addends.

ACTIVE
LISTENING



Fluency

DAY 2

$$12.41 + 13 + 137$$

$$131.44 + 881$$

$$543 + 2.006$$

$$68.432 + 27.13$$

$$131.41 + 319$$

$$549 + 4.1009$$

$$691.321 + 14.231$$

$$22,221.1 + 781$$

$$647 + 3.001$$

$$412,601.1 + 42.3407$$

JOB DONE



Year 6: Place Value Number Problems

Mastery Challenge Cards

2. Order these sets of numbers from smallest to largest:

9.9

9.09

9.099

9.99

6.56×10

665

1 tenth of 6556

-5.5

-5.05

-5.55

-5.055

0.12

$13 \div 100$

0.011

Fluency

DAY 3

Think Aloud

LO: To be able to subtract numbers that involve decimals.

$$234.3 - 12.61$$

$$432 - 123.11$$

	2	3	4 ³	.	3 ¹²	0 ¹
-	0	1	2	.	6	1
	2	2	1	.	6	9
	4	3 ²	2 ¹¹	.	0 ¹	0 ⁹
-	1	2	3	.	1	1
	3	0	8	.	8	9

SUCCESS STEPS

- 1) Write the subtrahend under the minuend in the correct columns.
- 2) Insert place holders into any empty spaces in the tenths, hundredths or thousandths columns where needed.
- 3) Subtract the columns in order, right to left.
- 4) When the subtrahend digit is larger than the minuend digit above it, use decomposition to increase its size by 10.
- 5) The difference is less than the minuend.

Independent Application

DAY 3

Fluency

691.321 - 14.231

22,221.1 - 781

647 - 3.001

412,601.1 - 42.3407

61.41 - 13.137

531.44 - 9.81

243 - 2.06

12.41 - 4.2

16.41- 13.137

131.44 - 8.81

543 - 2.006



Year 6: Place Value Number Problems

Mastery Challenge Cards

1. Match the statements to the numbers, explaining your choices:

My number has 3 hundreds.

28 672

My number is thirty one thousand to the nearest ten.

29 301

My number is thirty thousand to the nearest ten thousand.

30 092

My number is twenty eight and a half thousand to the nearest five hundred.

31 004

Fluency

DAY 4

Think Aloud

LO: To be able to multiply 3 digit numbers by 2 digit numbers.

$$325 \times 45 =$$

$$135 \times 21 =$$

		3	2	5	
X			4	5	
	1	6	2	5	
1	3	0	0	0	
1	4	6	2	5	
		1	3	5	
X			2	1	
		1	3	5	
	2	7	0	0	
	2	8	3	5	

- 1) Write the 3 digit number as the multiplicand and the 2 digit number as the multiplier
- 2) Multiply the ones number, tens and hundreds number of the multiplicand by the ones number of the multiplier, carrying tens when needed
- 3) Before multiplying with the tens number of the multiplier, write a place holder in the ones column
- 4) Multiply the ones number, tens number and hundreds number of the multiplicand by the tens number of the multiplier, carrying tens where needed
- 5) Add the two product together to find the product of the multiplicand and the multiplier.

Independent Application

DAY 4

Fluency

1) $465 \times 15 =$

2) $603 \times 24 =$

3) $217 \times 32 =$

4) $385 \times 47 =$

5) $506 \times 54 =$

6) $820 \times 28 =$

7) $768 \times 19 =$

8) $924 \times 62 =$



Year 6: Place Value Number Problems

Mastery Challenge Cards

3. Calculate $6231 + 2787$ by rounding each number to the nearest:

1000

100

50

10

Which gives the most accurate and least accurate answer?

Fluency

DAY 5

Think Aloud

LO: To be able to multiply and divide by 10, 100 and 1000.

1) 231.4×10

2) 231.4 divided by 100

3) 26 divided by 10

Multiply and Dividing by 10, 100, 1000

10 000	1000	100	10	1	●	$\frac{1}{10}$	$\frac{1}{100}$	$\frac{1}{1000}$
					●			
					●			

MULTIPLYING

DIVIDING

1)		2	3	1	.	4		
	2	3	1	4	.			
$231.4 \times 10 = 2314$								
2)		2	3	1	.	4		
				2	.	3	1	4
$231.4 \div 100 = 2.314$								
3)			2	6	.			
			2	.	6			
$26 \div 10 = 2.6$								

SUCCESS CRITERIA

- 1) If there is no decimal point on the multiplicand, add a decimal 'pointless'
- 2) Write another decimal point below the decimal point in the multiplicand
- 3) Decide whether the digits are moving to the right or the left
- 4) Decide how many columns the digits are moving
- 5) Move the digits the correct number of columns
- 6) Insert any place holders needed

ACTIVE LISTENING



Independent Application

DAY 5

Fluency

- A) 64.1 divided by 100
- B) 8.123×100
- C) 0.0001×1000
- D) 63,201 divided by 1000
- E) 0.01 divided by 100
- F) 94 divided by 10
- G) 6.123×1000

- A) 281.4×100
- B) 4201 divided by 10
- C) 0.09 divided by 10
- D) 0.09×100

- A) 64300 divided by 100
- B) 3401×100
- C) 2.341×10
- D) 64.124 divided by 10



Year 6 Place Value Maths Chilli Challenge Cards

It's getting hot!



Compare and Order

Order and compare numbers to at least 10,000,000 and determine the value of each digit. Write $<$, $>$ or $=$

5,151,515 5,151,155

Order the following:

2,722,727, 277,277, 2,727,272, 2,722,772

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smallest

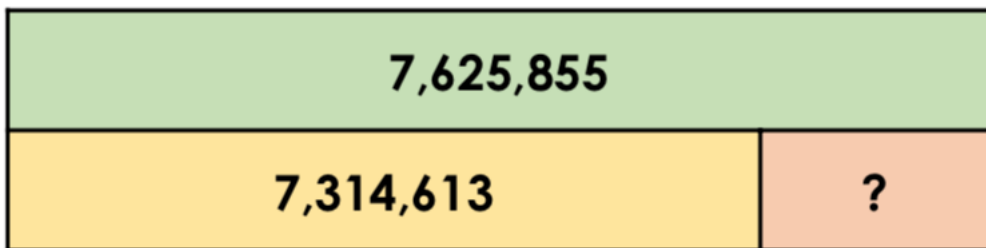
greatest

Fluency

WEEK 2 DAY 1

LO: To use knowledge of place value and inverse to calculate missing numbers

3a. Complete the bar models.



1a. Write the number in digits in the place value grid below.

Four million, three hundred and fifty-five thousand, four hundred and thirty-one.

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
4	3	5	5	4	3	1

2a. Calculate the missing numbers.

$$1,316,524 + \boxed{} = 4,531,235$$

$$3,556,228 = \boxed{} - 1,311,111$$

Think Aloud

Success Steps:

1. Read the question.
2. I know that different columns mean numbers have different values.
3. Different representations are converted to the same value.
4. Select the correct operation to answer the problem.
5. Calculate the answer.

ACTIVE LISTENING

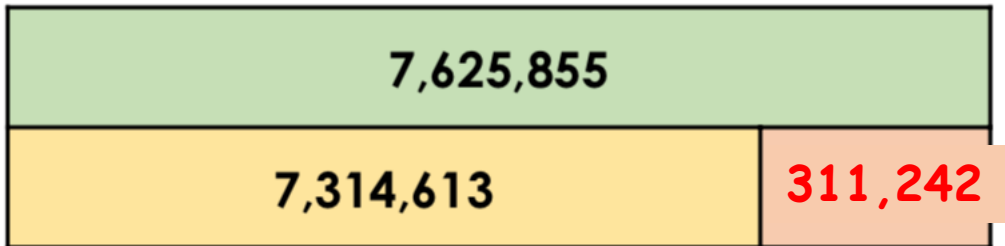
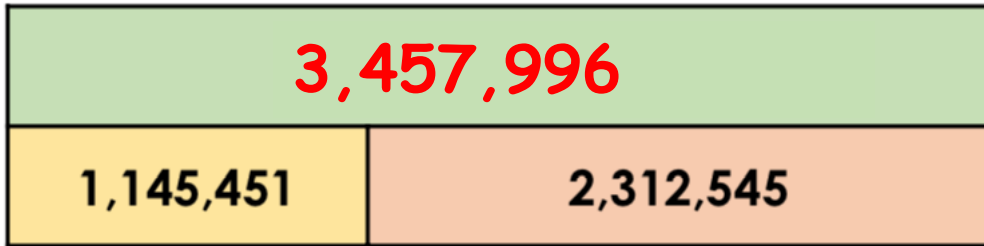


Fluency

WEEK 2 DAY 1

LO: To use knowledge of place value and inverse to calculate missing numbers.

3a. Complete the bar models.



3a)		2	3	1	2	5	4	5
	+	1	1	4	5	4	5	1
		3	4	5	7	9	9	6
		7	6	2	5	8	5	5
	-	7	3	1	4	6	1	3
		0	3	1	1	2	4	2

Think Aloud

Success Steps:

1. Read the question.
2. I know that different columns mean numbers have different values.
3. Different representations are converted to the same value.
4. Select the correct operation to answer the problem.
5. Calculate the answer.

ACTIVE LISTENING



Fluency

WEEK 2 DAY 1

LO: To use knowledge of place value and inverse to calculate missing numbers.

2a)		4	5	3	1	2	3	5
	-	1	3	1	6	5	2	4
		3	2	1	4	7	1	1
		3	5	5	6	2	2	8
	+	1	3	1	1	1	1	1
		4	8	6	7	3	3	9

Think Aloud

Success Steps:

1. Read the question.
2. I know that different columns mean numbers have different values.
3. Different representations are converted to the same value.
4. Select the correct operation to answer the problem.
5. Calculate the answer.

2a. Calculate the missing numbers.

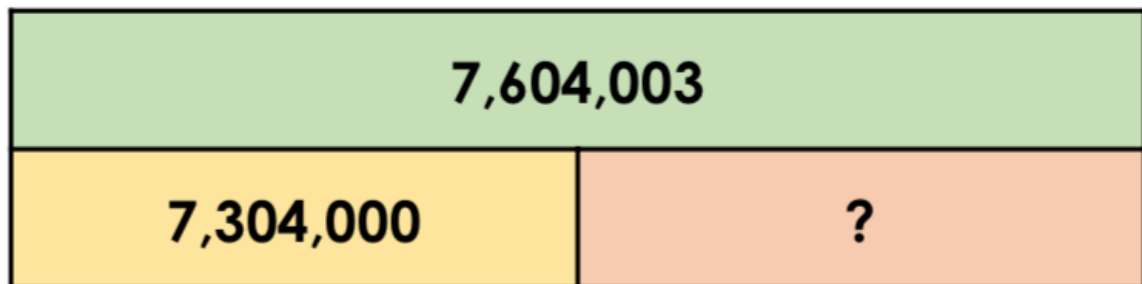
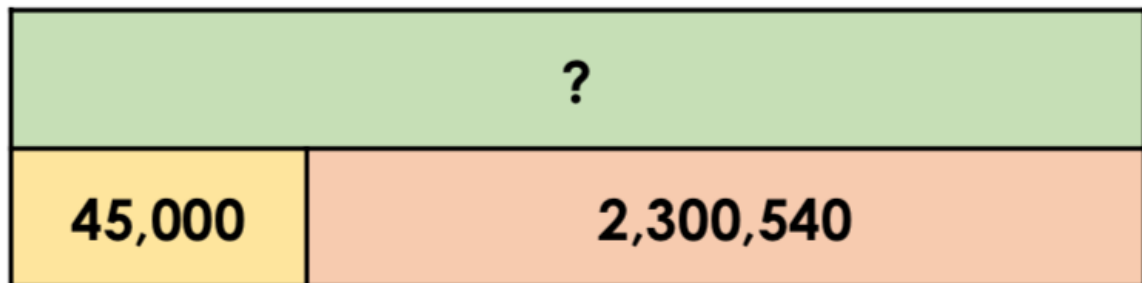
$$1,316,524 + \boxed{3,214,711} = 4,531,235$$

$$3,556,228 = \boxed{4,867,339} - 1,311,111$$

ACTIVE LISTENING



7a. Complete the bar models.



8a. Tick all the correct statements.

3,245,809

A. $3,000,000 + 245,000 + 800 + 9$ ☐

B. $3,200,000 + 45,000 + 809$ ☐

C. $3,000,009 + 240,000 + 5,800$ ☐

Complete the missing numbers.

$6,305,400 = \underline{\hspace{2cm}} + 300,000 + \underline{\hspace{2cm}} + 40$

$7,001,001 = 7,000,000 + \underline{\hspace{2cm}} + \underline{\hspace{2cm}}$

$42,550 = \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + \underline{\hspace{2cm}} + 50$

What numbers are represented?

M	HTh	TTh	Th	H	T	O
•	•	••	•	••	•	•••

M	HTh	TTh	Th	H	T	O
			••••		••	•••••

Match the representations to the numbers in digits.

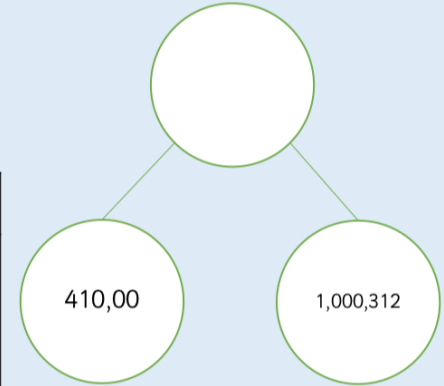
1,401,312

1,041,312

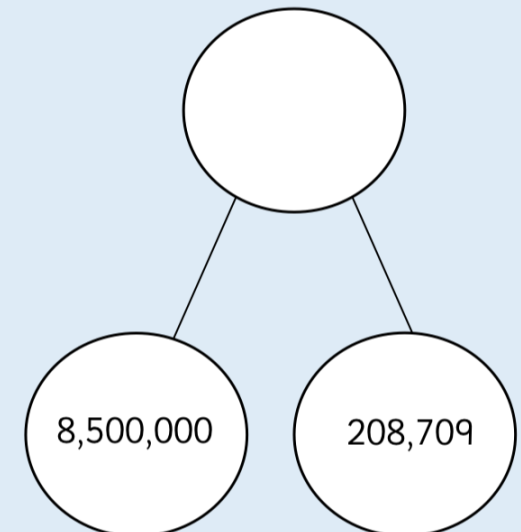
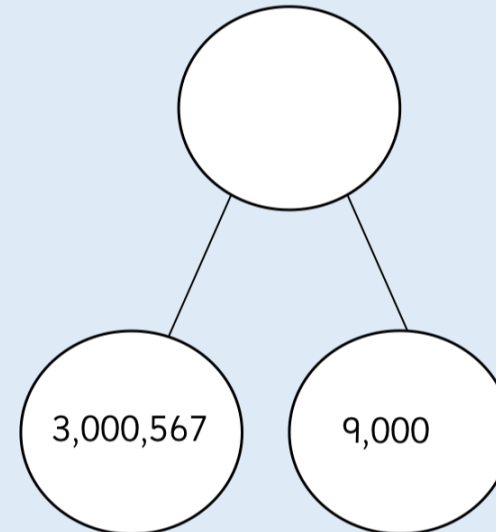
1,410,312

One million, four hundred and one thousand, three hundred and twelve.

M	HTh	TTh	Th	H	T	O
•		•••	•	•••	•	••



Complete the part whole model.



Fluency

WEEK 2 DAY 1

Match the words to the numbers in digits.

one million, four hundred and
nine thousand, two hundred and
sixteen

one hundred thousand, nine
hundred and fifteen

one million, nine hundred and
four thousand, five hundred and
forty-eight

one million, four hundred and
nine thousand, six hundred and
twelve

1,419,216

1,409,216

10,915

100,915

1,904,548

1,409,612

What numbers are represented?

M	HTh	TTh	Th	H	T	O

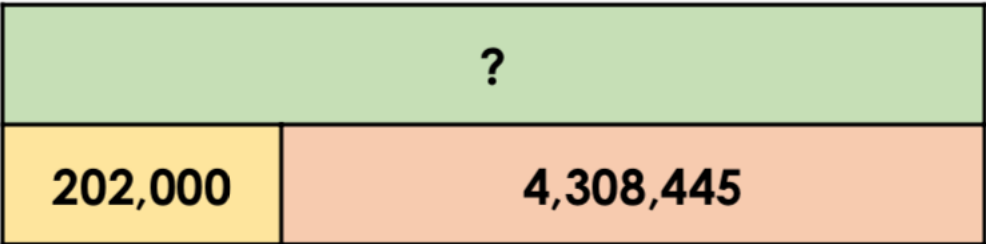
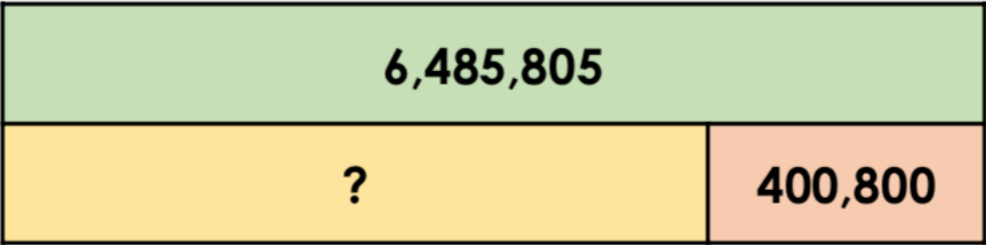
M	HTh	TTh	Th	H	T	O

1b. Write the number in digits in the place value grid below.

Six million, five hundred and eighty-one thousand, two hundred and fifteen.

Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones

7b. Complete the bar models.



Starter for 10

WEEK 2 DAY 2

Reasoning – Place Value of Digits in Numbers

Look at this number.

67,540.2

Write the digit that is in the ten thousands place.

Write the digit that is in the hundreds place.

Look at this number.

88,976.5

Write the digit that is in the hundreds place.

Write the digit that is in the tenths place.

Look at this number.

76,334.9

Write the digit that is in the tenths place.

Write the digit that is in the ones place.

Look at this number.

12,131.1

Write the digit that is in the thousands place.

Write the digit that is in the ones place.

Fluency

WEEK 2 DAY 2

Think Aloud

LO: To be able to multiply 3 digit numbers by 3 digit numbers.

$$234 \times 325$$

		2	3	4	
	X	3	0	0	
<hr/>					
7	0	2	0	0	
<hr/>					
		2	3	4	
	X		2	0	
<hr/>					
	4	6	8	0	
<hr/>					
		2	3	4	
	X			5	
<hr/>					
	1	1	7	0	
<hr/>					
		1	2		

	7	0	2	0	0	
		4	6	8	0	
+		1	1	7	0	
<hr/>						
	7	6	0	5	0	
		1	1			

$$234 \times 325 = 76,050$$

- 1) Decide which number will be the multiplier and which will be the multiplicand
- 2) Partition the multiplicand
- 3) Multiply the multiplier by the largest partitioned multiplicand.
- 4) Repeat step three until all parts of the partitioned multiplicand have been multiplied.
- 4) Add the products together to find the overall product of the multiplicand and the multiplier.

Independent Application

WEEK 2 DAY 2

Fluency

A) 25.1×62.1

B) 4.3×63.2

C) 3.01×100

D) 2.81×3.32

A) 271×325

B) 42.2×23.5

C) 3.21×100

D) 4.22×3.52

A) 32.1×23.4

B) 31×3.22



Starter for 10

WEEK 2 DAY 3

Reasoning – Place Value of Digits in Numbers

Look at this number.

34,567.8

Write the digit that is in the thousands place.

Write the digit that is in the tenths place.

Look at this number.

56,453.9

Write the digit that is in the tens place.

Write the digit that is in the thousands place.

Look at this number.

12,656.3

Write the digit that is in the ones place.

Write the digit that is in the ten thousands place.

Look at this number.

67,564.1

Write the digit that is in the tenths place.

Write the digit that is in the hundreds place.

Fluency

WEEK 2 DAY 3

Think Aloud

LO: To be able to calculate any percentage of any base value

A) 32% of 600

6	0	0	÷	1	0	0	=	6
		3	2					
	X		6					
	1	9	2					
		1						

$$32\% \text{ of } 600 = 192$$

- 1) I can divide the base value by 100
- 2) I can use the divided base value and the target percentage to form a multiplication calculation
- 3) I can complete the multiplication to find the value of the target percentage
- 4) All 2 digit target percentages will be less than the base value

ACTIVE
LISTENING



Independent Application

WEEK 2 DAY 3

Fluency

A) 34% of 300

B) 27% of 700

C) 28% of 400

D) 37% of 600

A) 62% of 700

B) 77% of 800

C) 42% of 500

D) 23% of 900

Challenge

A) 27% of 560

B) 42% of 720

C) 18% of 370

D) 52% of 326



Starter for 10

WEEK 2 DAY 4

Reasoning – Place Value of Digits in Numbers

Look at this number.

54,678.5

Write the digit that is in the hundreds place.

Write the digit that is in the ones place.

Look at this number.

68,723.2

Write the digit that is in the ten thousands place.

Write the digit that is in the tenths place.

Look at this number.

65,755.1

Write the digit that is in the thousands place.

Write the digit that is in the tens place.

Look at this number.

88,759.4

Write the digit that is in the ones place.

Write the digit that is in the thousands place.

Fluency

WEEK 2 DAY 4

Think Aloud

LO: To round any given number to the nearest whole number, 10, 100 or 1000.

Round to the nearest
10,100,1000

- A) 7,917
- B) 6, 299
- C) 14,729
- D) 16, 999

	Nearest 10	Nearest 100	Nearest 1000
7,91 <u>7</u>	7,920	7,900	8,000
6,299	6,300	6,300	6,000
14,729	14,730	14,700	15,000
16,999	17,000	17,000	17,000

Success Step

1. I know minimum number of zeros
2. I can use the minimum zeros to find the decider digit.
3. I can use the decider digit to know if I add one to the remaining digits or not.
4. I can write the rounded number
5. I am careful when there are consecutive 9s

REMEMBER!!! 1,2,3,4 – Round DOWN 5,6,7,8,9 – Round UP

ACTIVE
LISTENING



Independent Application

WEEK 2 DAY 4

Fluency

Round to the nearest
10,100,1000

A) 12,617

B) 59, 812

C) 63,176

D) 27, 999

Round to the nearest
10,100,1000

A) 4,719

B) 14,288

C) 79,918

D) 81,917

Round to the nearest
10,100,1000

A) 4,719

B) 14,288

C) 79,918

D) 81,917

Challenge

Round to the nearest 10,000 and
100,000

A) 6,472,621

B) 3, 999, 421

C) 2, 170, 912

Reasoning – Place Value of Digits in Numbers

Look at this number.

56,455.8

Write the digit that is in the ones place.

Write the digit that is in the tenths place.

Look at this number.

12,565.4

Write the digit that is in the hundreds place.

Write the digit that is in the thousands place.

Look at this number.

78,760.3

Write the digit that is in the tenths place.

Write the digit that is in the ten thousands place.

Look at this number.

37,887.1

Write the digit that is in the ten thousands place.

Write the digit that is in the tens place.

Fluency

WEEK 2 DAY 5

Think Aloud

LO: To be able to use the formal method of division

A) 848 divided by 4

B) 711 divided by 3

		2	1	2		
	4	8	4	8		
848 ÷ 4 = 212						
		2	3	7		
	3	7	1	1		
			1	2		
711 ÷ 3 = 237						

- 1) I can divide the first digit of my dividend and carry any remainder to the right
- 2) When I have a remainder after dividing the ones digit of the dividend, I can add a decimal point to complete the quotient
- 3) I have an efficient strategy when I do not know the multiples of the divisor
- 4) My quotient is smaller than the dividend

ACTIVE
LISTENING



Independent Application

WEEK 2 DAY 5

Fluency

A) 536 divided by 4

B) 289 divided by 5

C) 1,261 divided by 100

D) 4,217 divided by 5

A) 399 divided by 3

B) 732 divided by 4

C) 741 divided by 10

D) 287 divided by 5

A) 918 divided by 3

B) 426 divided by 100

C) 623 divided by 4

D) 188 divided by 5

