

Lesson 7 – Round within 10 Million

NC Objective:

Round any whole number to a required degree of accuracy

Resources needed:

Differentiated Worksheets
Teaching Slides

Vocabulary:

Rounding, digits, place value, million, hundred thousand, ten thousand, thousand and hundred

Children build on their prior knowledge of rounding. They will learn to round any number within ten million.

They use their knowledge of multiples to work out which two numbers the number they are rounding sits between.

Key Questions:

Why do we round up if the following digit is 5 or above? Which place value column do we need to look at when we round to the nearest 100,000? What is the purpose of rounding? When is it best to round to 1,000? to 10,000? Can you justify your reasoning?

★ Working Towards

Complete the statements to make them true.

Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

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- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

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- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Write five numbers that round to the nearest:

- 30,000
- 50,000
- 80,000
- 200,000
- 400,000
- 700,000

★★ Working Within

Complete the statements to make them true.

Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

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- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Write five numbers that round to the nearest:

- 100,000
- 90,000
- 900,000
- 2,000,000
- 80,000
- 6,000,000

★★★ Greater Depth

Find the missing digits.

The number in the place value chart rounds to:

- the nearest 10,000 as 6,540,000
- the nearest 100,000 as 6,500,000
- the nearest 1,000,000 as 7,000,000

The number in the place value chart rounds to:

- the nearest 10,000 as 1,870,000
- the nearest 100,000 as 1,900,000
- the nearest 1,000,000 as 2,000,000

The number in the place value chart rounds to:

- the nearest 10,000 as 3,740,000
- the nearest 100,000 as 3,700,000
- the nearest 1,000,000 as 4,000,000

Circle the numbers which round to 100,000.

129,568 49,224 81,104 151,000 11,008

160,210 33,652 138,771 149,090 51,565

Circle the numbers which round to 2,000,000.

1,534,317 2,347,906 1,801,801 2,269,999 2,502,205

1,499,499 2,489,045 1,600,001 1,400,988 2,500,000

Circle the numbers which round to 70,000.

69,011 59,875 72,008 76,909 63,123

68,443 70,999 71,366 66,666 75,000

Children on this sheet will round numbers to the nearest thousand, ten thousand and million using place value charts with an extra row to find the number represented.

Children on this sheet will round numbers up or down to the nearest thousand, ten thousand and million.

Children on this sheet will identify digits in numbers using information about the rounded numbers and circle numbers which round to a given number.

Reasoning & Problem Solving

Zach says,
My number is 4,560 when rounded to the nearest 10.

Leonna says,
My number is 4,600 when rounded to the nearest 100.

Both numbers are whole numbers.
What is the greatest possible difference between the two numbers?

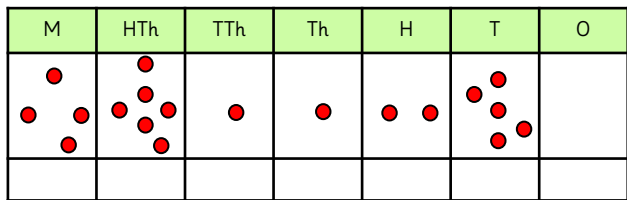
Tia rounded 6,123,404 to the nearest million.
My number is 6,123,000.

Can you explain to Tia what mistake she has made?

Children continue working on rounding numbers by answering reasoning questions.

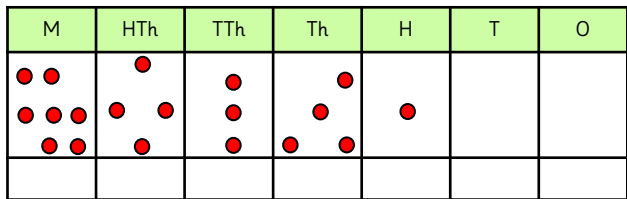


Complete the statements to make them true.



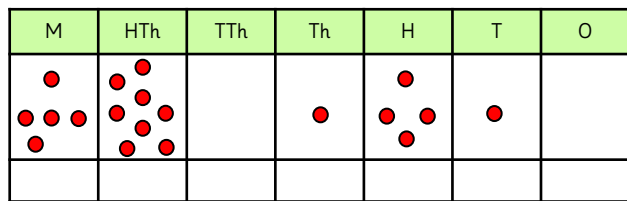
Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000



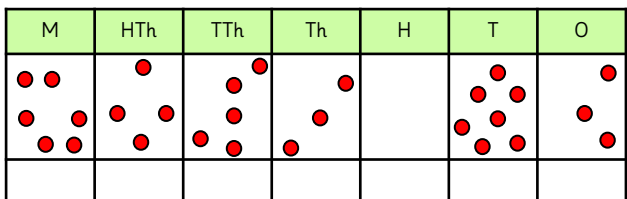
Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000



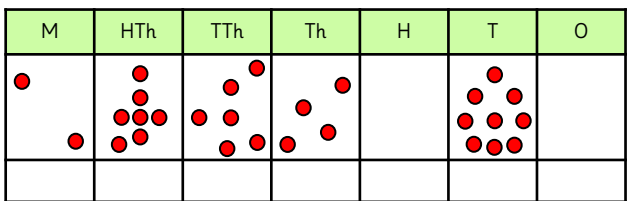
Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Write five numbers that round to the nearest:

30,000 - _____, _____, _____, _____, _____

50,000 - _____, _____, _____, _____, _____

80,000 - _____, _____, _____, _____, _____

200,000 - _____, _____, _____, _____, _____

400,000 - _____, _____, _____, _____, _____

700,000 - _____, _____, _____, _____, _____



Complete the statements to make them true.

| M | HTh | TTh | Th | H | T | O |
|---|-----|-----|----|---|---|---|
| | | | | | | |
| 4 | 6 | 1 | 1 | 2 | 5 | 0 |

Round the number in the place value chart to:

- the nearest 10,000 4,610,000
- the nearest 100,000 4,600,000
- the nearest 1,000,000 5,000,000

| M | HTh | TTh | Th | H | T | O |
|---|-----|-----|----|---|---|---|
| | | | | | | |
| 7 | 4 | 3 | 4 | 1 | 0 | 0 |

Round the number in the place value chart to:

- the nearest 10,000 7,430,000
- the nearest 100,000 7,400,000
- the nearest 1,000,000 7,000,000

| M | HTh | TTh | Th | H | T | O |
|---|-----|-----|----|---|---|---|
| | | | | | | |
| 5 | 8 | 0 | 1 | 4 | 1 | 0 |

Round the number in the place value chart to:

- the nearest 10,000 5,800,000
- the nearest 100,000 5,800,000
- the nearest 1,000,000 6,000,000

| M | HTh | TTh | Th | H | T | O |
|---|-----|-----|----|---|---|---|
| | | | | | | |
| 6 | 4 | 5 | 3 | 0 | 7 | 3 |

Round the number in the place value chart to:

- the nearest 10,000 6,450,000
- the nearest 100,000 6,500,000
- the nearest 1,000,000 6,000,000

| M | HTh | TTh | Th | H | T | O |
|---|-----|-----|----|---|---|---|
| | | | | | | |
| 2 | 7 | 6 | 4 | 0 | 9 | 0 |

Round the number in the place value chart to:

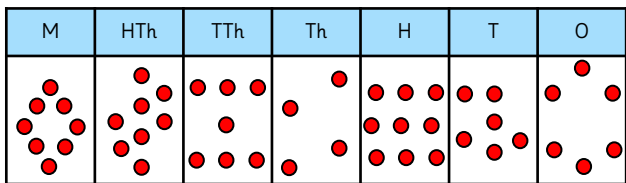
- the nearest 10,000 2,760,000
- the nearest 100,000 2,800,000
- the nearest 1,000,000 3,000,000

Write five numbers that round to the nearest:

- 30,000 - _____, Between 25,000 - 34,999, _____, _____
- 50,000 - _____, Between 45,000 - 54,999, _____, _____
- 80,000 - _____, Between 75,000 - 84,999, _____, _____
- 200,000 - _____, Between 150,000 - 249,999, _____, _____
- 400,000 - _____, Between 350,000 - 449,999, _____, _____
- 700,000 - _____, Between 650,000 - 749,999, _____, _____

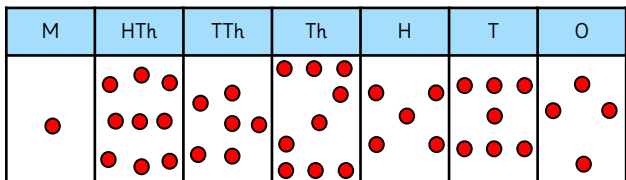


Complete the statements to make them true.



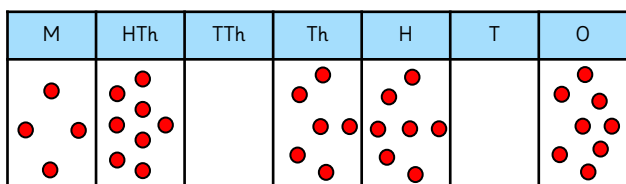
Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000



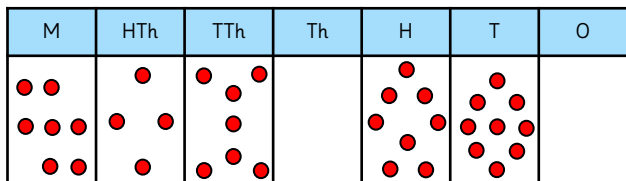
Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000



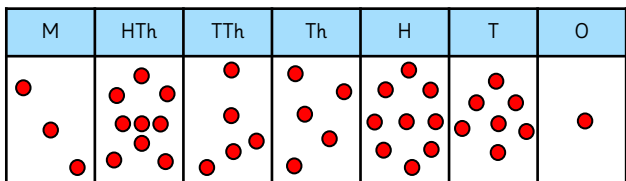
Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

Write five numbers that round to the nearest:

100,000 - _____, _____, _____, _____, _____

90,000 - _____, _____, _____, _____, _____

900,000 - _____, _____, _____, _____, _____

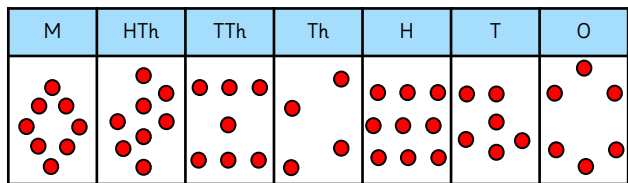
2,000,000 - _____, _____, _____, _____, _____

80,000 - _____, _____, _____, _____, _____

6,000,000 - _____, _____, _____, _____, _____



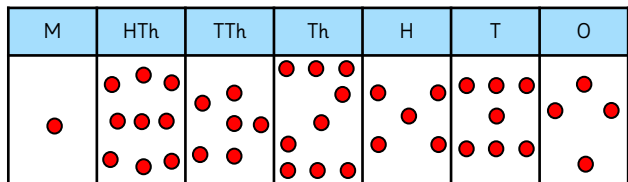
Complete the statements to make them true.



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

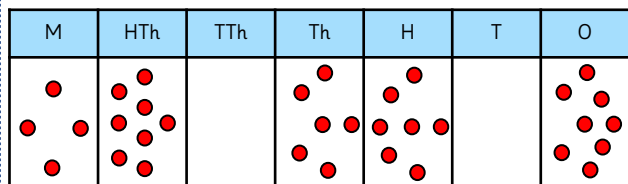
| |
|-----------|
| 8,870,000 |
| 8,900,000 |
| 9,000,000 |



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

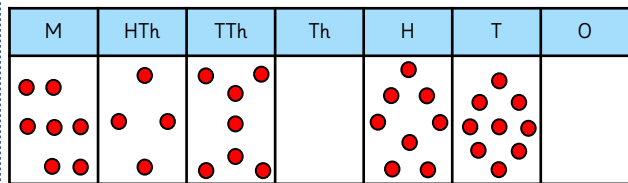
| |
|-----------|
| 1,970,000 |
| 2,000,000 |
| 2,000,000 |



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

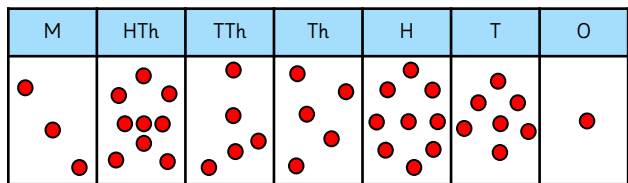
| |
|-----------|
| 4,810,000 |
| 4,800,000 |
| 5,000,000 |



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

| |
|-----------|
| 7,470,000 |
| 7,500,000 |
| 7,000,000 |



Round the number in the place value chart to:

- the nearest 10,000
- the nearest 100,000
- the nearest 1,000,000

| |
|-----------|
| 3,960,000 |
| 4,000,000 |
| 4,000,000 |

Write five numbers that round to the nearest:

100,000 - _____, **Between 50,000 - 144,999**, _____, _____

90,000 - _____, **Between 85,000 - 94,999**, _____, _____

900,000 - _____, **Between 850,000 - 949,999**, _____, _____

2,000,000 - _____, **Between 1,500,000 - 2,499,999**, _____, _____

80,000 - _____, **Between 75,000 - 84,999**, _____, _____

6,000,000 - _____, **Between 5,500,000 - 6,499,999**, _____, _____



Find the missing digits.

| M | HTh | TTh | Th | H | T | O |
|---|-----|-----|----|---|---|---|
| 6 | 5 | 4 | 0 | 0 | 0 | 0 |

The number in the place value chart rounds to:

- the nearest 10,000 as 6,540,000
- the nearest 100,000 as 6,500,000
- the nearest 1,000,000 as 7,000,000

| M | HTh | TTh | Th | H | T | O |
|---|-----|-----|----|---|---|---|
| 1 | 8 | 7 | 0 | 0 | 0 | 0 |

The number in the place value chart rounds to:

- the nearest 10,000 as 1,870,000
- the nearest 100,000 as 1,900,000
- the nearest 1,000,000 as 2,000,000

| M | HTh | TTh | Th | H | T | O |
|---|-----|-----|----|---|---|---|
| 3 | 7 | 4 | 0 | 0 | 0 | 0 |

The number in the place value chart rounds to:

- the nearest 10,000 as 3,740,000
- the nearest 100,000 as 3,700,000
- the nearest 1,000,000 as 4,000,000

Circle the numbers which round to 100,000.

129,568

49,224

81,109

151,000

11,008

160,210

33,652

138,771

149,090

51,565

Circle the numbers which round to 2,000,000.

1,534,317

2,347,906

1,801,801

2,269,999

2,502,205

1,499,499

2,489,045

1,600,001

1,400,988

2,500,000

Circle the numbers which round to 70,000.

69,011

59,875

72,008

76,909

63,123

68,443

70,999

71,366

66,666

75,000



Find the missing digits.

| M | HTh | TTh | Th | H | T | O |
|--------|--------|--------|---------------|--------|--------|--------|
| 5 dots | 6 dots | 4 dots | 5, 6, 7, 8, 9 | 6 dots | 4 dots | 5 dots |

The number in the place value chart rounds to:

- the nearest 10,000 as 6,540,000
- the nearest 100,000 as 6,500,000
- the nearest 1,000,000 as 7,000,000

| M | HTh | TTh | Th | H | T | O |
|-------|--------|--------|---------------|--------|--------|--------|
| 1 dot | 7 dots | 8 dots | 5, 6, 7, 8, 9 | 6 dots | 4 dots | 5 dots |

The number in the place value chart rounds to:

- the nearest 10,000 as 1,870,000
- the nearest 100,000 as 1,900,000
- the nearest 1,000,000 as 2,000,000

| M | HTh | TTh | Th | H | T | O |
|--------|--------|--------|-------|--------|--------|--------|
| 3 dots | 7 dots | 4 dots | 1 dot | 6 dots | 4 dots | 5 dots |

The number in the place value chart rounds to:

- the nearest 10,000 as 3,740,000
- the nearest 100,000 as 3,700,000
- the nearest 1,000,000 as 4,000,000

Circle the numbers which round to 100,000.

| | | | | |
|---------|--------|---------|---------|--------|
| 129,568 | 49,224 | 81,109 | 151,000 | 11,008 |
| 160,210 | 33,652 | 138,771 | 149,090 | 51,565 |

Circle the numbers which round to 2,000,000.

| | | | | |
|-----------|-----------|-----------|-----------|-----------|
| 1,534,317 | 2,347,906 | 1,801,801 | 2,269,999 | 2,502,205 |
| 1,499,499 | 2,489,045 | 1,600,001 | 1,400,988 | 2,500,000 |

Circle the numbers which round to 70,000.

| | | | | |
|--------|--------|--------|--------|--------|
| 69,011 | 59,875 | 72,008 | 76,909 | 63,123 |
| 68,443 | 70,999 | 71,366 | 66,666 | 75,000 |

Zach says,

My number is 4,560
when rounded to the
nearest 10.



Leanna says,



My number is 4,600
when rounded to the
nearest 100.

Both numbers are whole numbers.

What is the greatest possible
difference between the two numbers?

Tia rounded 6,123,404 to the nearest million.

My number is
6,123,000.



Can you explain to Tia what mistake
she has made?

Zach says,

My number is 4,560
when rounded to the
nearest 10.



Leanna says,



My number is 4,600
when rounded to the
nearest 100.

Both numbers are whole numbers.

What is the greatest possible
difference between the two numbers?

Tia rounded 6,123,404 to the nearest
million.

My number is
6,123,000.



Can you explain to Tia what mistake
she has made?

4,555 is the lowest possible number.

Zach says,

My number is 4,560
when rounded to the
nearest 10.



Leanna says,

4,649 is the highest possible number.



My number is 4,600
when rounded to the
nearest 100.

Both numbers are whole numbers.

What is the greatest possible
difference between the two numbers?

$$4,649 - 4,555 = 94$$

The greatest possible difference is 94.

Tia rounded 6,123,404 to the nearest
million.

My number is
6,123,000.



Can you explain to Tia what mistake
she has made?

She has rounded it to the nearest million,
but all other columns should be zero.

4,555 is the lowest possible number.

Zach says,

My number is 4,560
when rounded to the
nearest 10.



Leanna says,

4,649 is the highest possible number.



My number is 4,600
when rounded to the
nearest 100.

Both numbers are whole numbers.

What is the greatest possible
difference between the two numbers?

$$4,649 - 4,555 = 94$$

The greatest possible difference is 94.

Tia rounded 6,123,404 to the nearest
million.

My number is
6,123,000.



Can you explain to Tia what mistake
she has made?

She has rounded it to the nearest million,
but all other columns should be zero.