

Place Value

Big Idea (6): Mixed numbers and decimal numbers represent quantities that can be decomposed into parts and wholes.

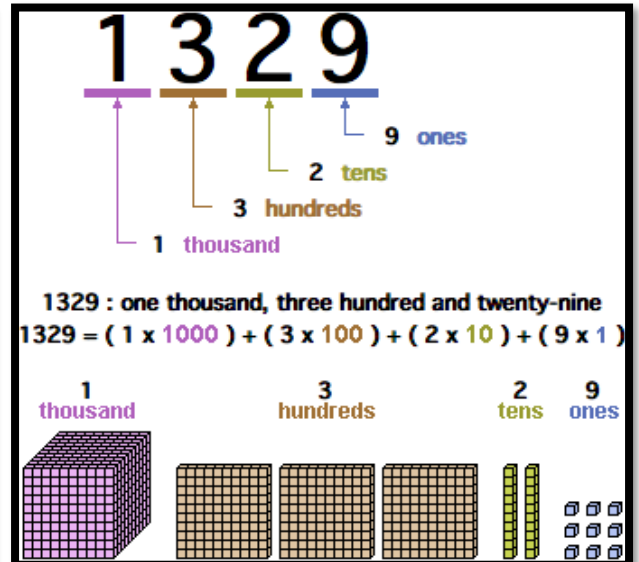
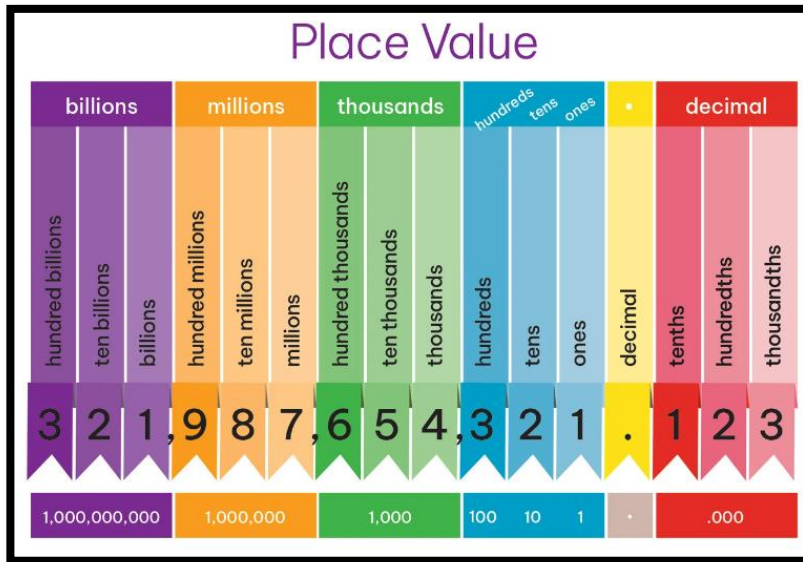
Big Idea (5): Computational fluency and flexibility with numbers extend to operations with larger (multi-digit) numbers.

Content (5):

- place value: 100 000s, 10 000s, 1000s, 100s, 10s, and 1s
- Numbers to **1 000 000** can be arranged and recognized

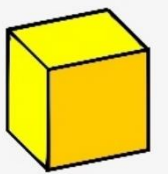
Content (6):

- small to large numbers
- place value from thousandths to billions, operations with **thousandths to billions**



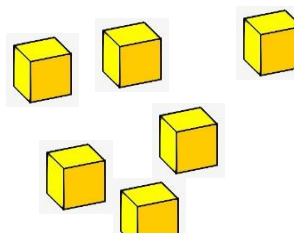
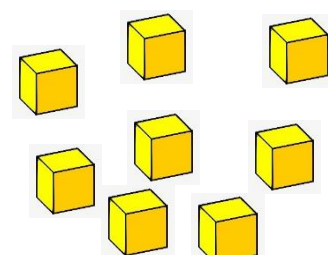
Place value is the system in which the position of a digit in a number, determines its value.

Ones

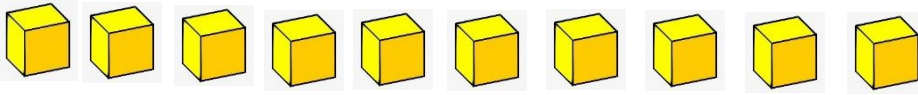


The ones column represents just numbers 0-9. When you are given a single digit number, it is automatically in the ones column.

In each box, count how many ones there are, and write down the number

Tens



The tens column is when you have two digits, and you are looking at the digit on the left. It is made up using numbers 0-9, but can represent 10, 20, 30, 40, 50, 60, 70, 80, or 90.

If you have 10 ones, then you technically have a tens-bar. This bar is worth exactly ten.



Look at the images below, and circle which number most closely represents the quantity in the image:



Cars

10, 20, 30, 40, 50, 60, 70, 80, 90



Cats

10, 20, 30, 40, 50, 60, 70, 80, 90



Balloons

10, 20, 30, 40, 50, 60, 70, 80, 90



Zebra

10, 20, 30, 40, 50, 60, 70, 80, 90



Buttons

10, 20, 30, 40, 50, 60, 70, 80, 90



Coins

10, 20, 30, 40, 50, 60, 70, 80, 90



Roughly how many boxes of these crayons would you need to get at least 30 crayons?

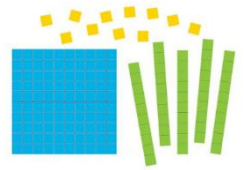


Roughly how many boxes of these crayons would you need to get at least 70 crayons?



Roughly how many packages of these crayons would you need to get at least 50 crayons?

Using base ten blocks, how many different ways can you make the following numbers?
Draw in 3 different ways to make the number:



70

--	--	--

80

--	--	--

40

--	--	--

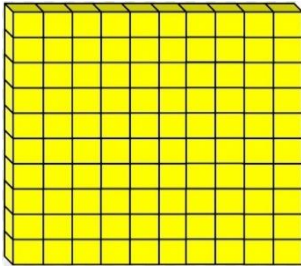
20

--	--	--

50

--	--	--

Hundreds



Hundreds are the 1st, of a 3-digit number.



Estimate the following numbers:



How many people are at this beach?

100, 200, 300, 400, 500, 600, 700, 800, 900



How many people in this audience?

100, 200, 300, 400, 500, 600, 700, 800, 900



How many ants are there?

100, 200, 300, 400, 500, 600, 700, 800, 900



How many people in this group?

100, 200, 300, 400, 500, 600, 700, 800, 900



How many sequins in their hand?

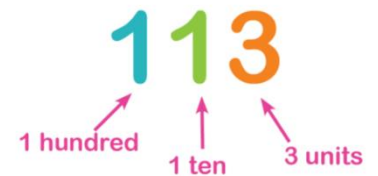
100, 200, 300, 400, 500, 600, 700, 800, 900



How many seagulls?

100, 200, 300, 400, 500, 600, 700, 800, 900

Using base ten blocks, how many different ways can you make the following numbers? Draw in 3 different ways to make the number:



200

--	--	--

600

--	--	--

Place Value Mat

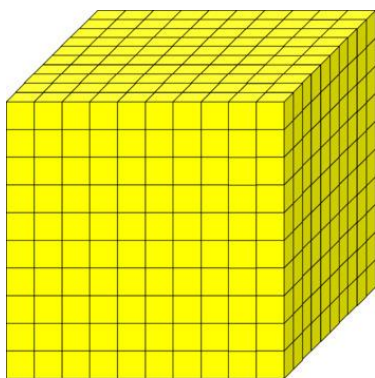
Hundreds	Tens	Ones

On the mat above, place your base ten blocks. Try to make 1-5 different ways of 'arranging' the following numbers:

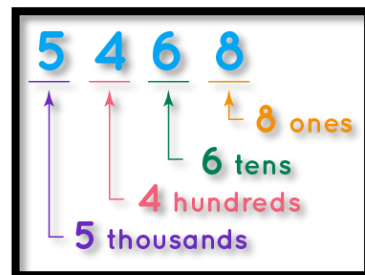
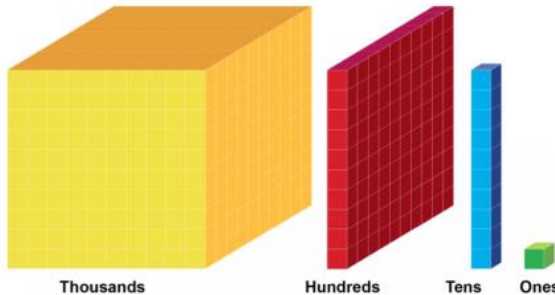
205	310	876	902	346	453	466	619
456	784	833	401	202	250	523	351
999	101	100	105	243	435	532	918
413	249	520	160	808	404	303	931

Now try your own, and write down the number that you did:

Thousands



Thousands are the 1st, of a 4-digit number.



The thousands go from 1,000, up to 9,000. After 9,000, the next thousand is 10,000, which is the NEXT number place on the left. In this section, we are thinking about numbers from 1,000 to 9,000.

Complete the chart to make sense of numbers in the 1000s. Follow the example on the first line.

Number	Thousands	Hundreds	Tens	Ones
2841	2000 	800 	40 	1
3495				
6218				
6879				

Estimate the following numbers. Which number is it closest to?



How many jelly beans in this jar?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many melty beads in this tub?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many beads in the bin?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many seats in South Surrey Arena?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many people in this crowd?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many people at this concert?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000

Re-wording numbers:

With numbers in the thousands, you can often say them two ways. In the first way, you focus on the number being in the thousands. In the second way, you focus on the number as a hundred. Practice writing them out each way:

6800	Six thousand, eight hundred	Sixty-eight hundred
3200		
4100		
5900		
7800		
9500		
1200		
1600		
2200		
6800		

Rounding

When we round, we can either 'round up' (estimate higher), or 'round down' (estimate lower). We 'round' numbers, to make it easier to work with them mentally. For example, if someone is selling an item for \$6891, it's much easier to think of it as \$6800, or even \$7000. But the number 6891 is such a random number, that it's much easier to picture a number that's CLOSE to it. Depending on the number, you can round in the ones column, the tens column, the hundreds column, or even the thousands column.

For each of these puppies listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart again.

 White Swiss Shepherd puppy = \$2755	Price		Thousands	Hundreds	Tens	Ones
	\$2755	\$2755	2000	700	50	5
	Round up	\$2760	2000	700	60	0
	Round up again	\$2800	2000	800	0	0
	Round down	\$2750	2000	700	50	0
	Round down again	\$2700	2000	700	0	0
 Husky cross puppy = \$1475	Price		Thousands	Hundreds	Tens	Ones
		\$1475				
	Round up					
	Round up again					
	Round down					
	Round down again					
 Great Dane x Bull Mastiff puppy = \$3225	Price		Thousands	Hundreds	Tens	Ones
		\$3225				
	Round up					
	Round up again					
	Round down					
	Round down again					



Aussie Doodle puppy = \$5675

Price		Thousands	Hundreds	Tens	Ones
	\$5675				
Round up					
Round up again					
Round down					
Round down again					



Duck toller puppy = \$4455

Price		Thousands	Hundreds	Tens	Ones
	\$4455				
Round up					
Round up again					
Round down					
Round down again					

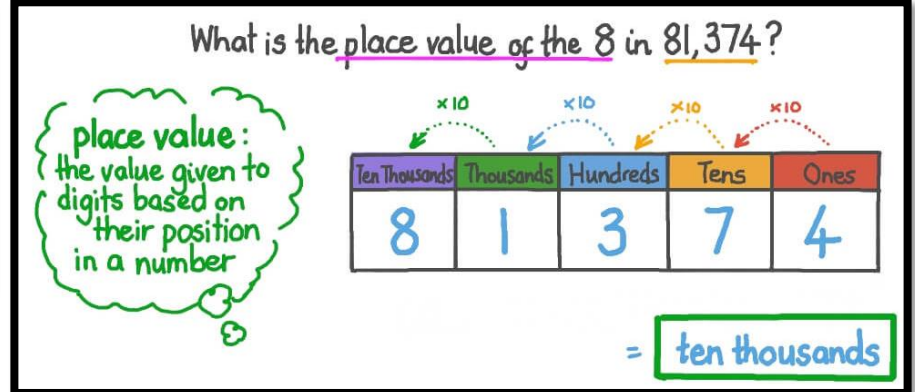
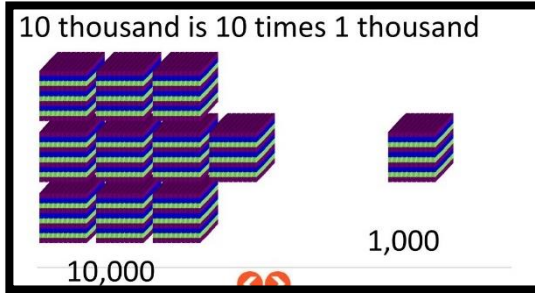


Golden Retriever puppy= \$5255

Price		Thousands	Hundreds	Tens	Ones
	\$5255				
Round up					
Round up again					
Round down					
Round down again					

Ten Thousands

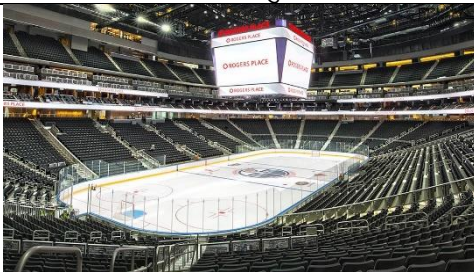
Ten Thousands are the 1st, of a 5-digit number.



When we are thinking about numbers in the ten thousands, we are thinking about the numbers 10,000 20,000 30,000 40,000 50,000 60,000 70,000 80,000 and 90,000. Once we get ten thousand bigger than 90,000, then we reach 100,000. That is the NEXT place over in the left in place value.

The image of money is really interesting. The small pile is what \$10,000 looks like, made out of \$100 bills. The big pile of cash, is \$10,000 made out of \$1 bills.

Estimate the following numbers:



How many seats in Rogers Arena?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many seats in Ohio stadium?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many seats in the Roman Colosseum?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many seats in Massey Hall?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many seats in the Bolshoi Theater?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000



How many seats inside the Sydney Opera House?

1000, 2000, 3000, 4000, 5000, 6000, 7000, 8000, 9000

For each of these cars listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart again.



2023 Toyota Sienna, hubrid = \$41,655

Price		Ten Thousands	Thousands	Hundreds	Tens	Ones
\$41,655		40000	1000	600	50	5
Round up						
Round up again						
Round down						
Round down again						



Tesla Model 3, long range, fully electric = \$85,995

Price		Ten thousands	Thousands	Hundreds	Tens	Ones
	\$85,995					
Round up						
Round up again						
Round down						
Round down again						



Ford F150, fully electric = \$95,955

Price		Ten thousands	Thousands	Hundreds	Tens	Ones
	\$95,955					
Round up						
Round up again						
Round down						
Round down again						

For each of these cars listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart again.



2023 Mustang Mach-E, fully electric = \$37,470

Price		Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$37,470					
Round up						
Round up again						
Round down						
Round down again						



2022 Toyota Highlander, hybrid, = \$51,425

Price		Ten thousands	Thousands	Hundreds	Tens	Ones
	\$51,425					
Round up						
Round up again						
Round down						
Round down again						



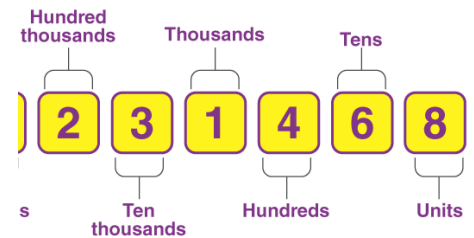
Hyundai Ioniq 5, fully electric = \$48,885

Price		Ten thousands	Thousands	Hundreds	Tens	Ones
	\$48,885					
Round up						
Round up again						
Round down						
Round down again						

Hundred Thousands

Hundred Thousands are the 1st, of a 6-digit number.

When we are thinking of hundred thousands. We are thinking of the numbers 100,000 200,000 300,000 400,000 500,000 600,000 700,000 800,000 and 900,000. If we went up 100,000 more, then we would hit a million!



For each of these homes for sale listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart again.



2-bed, 2-bath condo in White Rock, \$799,949

Price		Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$799,949	700,000	90,000	9,000	900	40	9
Round up							
Round up again							
Round down							
Round down again							



1-bed, 1-bath condo in White Rock = \$649,855

Price		Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$649,855						
Round up							
Round up again							
Round down							
Round down again							



2-bed, 2-bath condo, right on Marine Drive, = \$949,449

Price		Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$949,449						
Round up							
Round up again							
Round down							
Round down again							

For each of these homes for sale listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart.



2-bed, 2-bath condo in South Surrey, \$535,225

Price		Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$535,225						
Round up							
Round up again							
Round down							
Round down again							



1-bed, 1-bath condo in South Surrey = \$355,515

Price		Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$355,515						
Round up							
Round up again							
Round down							
Round down again							



2-bed, 2-bath townhouse, South Surrey, = \$419,900

Price		Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$419,900						
Round up							
Round up again							
Round down							
Round down again							



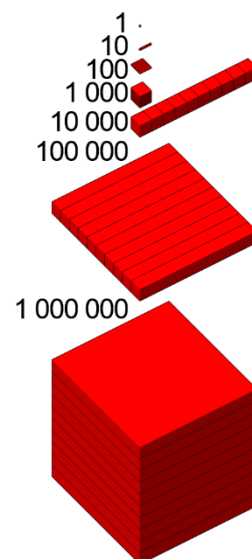
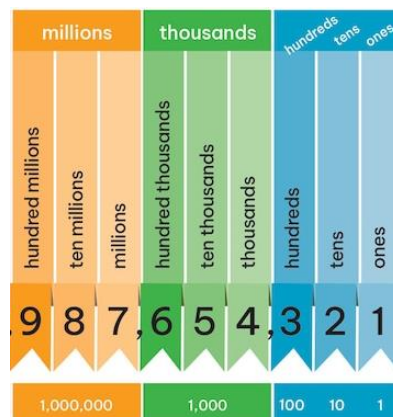
2-bed, 2-bath condo, South Surrey, = \$639,435

Price		Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$639,435						
Round up							
Round up again							
Round down							
Round down again							

Millions

Millions are the 1st, of a 7-digit number. Let's remind ourselves what numbers look like:

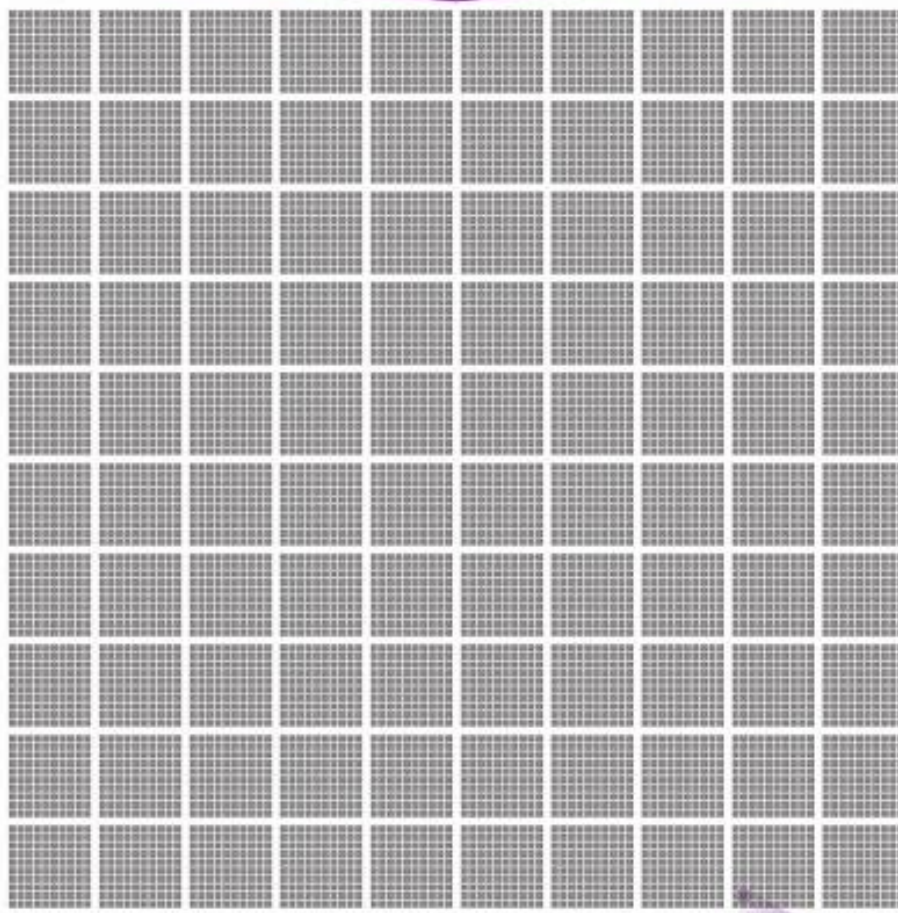
Ones	1
Tens	10
Hundreds	100
Thousands	1000
Ten thousands	10,000
Hundred thousands	100,000
Millions	1,000,000



When we are talking about millions, we are talking about:

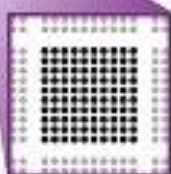
One million	1,000,000
Two million	2,000,000
Three million	3,000,000
Four million	4,000,000
Five million	5,000,000
Six million	6,000,000
Seven million	7,000,000
Eight million	8,000,000
Nine million	9,000,000

One Million



Did you notice?

Each small square on this poster is made up of 100 dots!



For each of these homes for sale listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart.



5-bed, 5-bath house in South Surrey, near Art Knapp, \$2,599,225

Price		Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$2,599,225	2,000,000	500,000	90,000	9,000	200	20	5
Round up								
Round up again								
Round down								
Round down again								



5-bed, 7-bath house in South Surrey, near Crescent Beach = \$7,499,888

Price		Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$7,499,888							
Round up								
Round up again								
Round down								
Round down again								



5-bed, 8-bath house on Marine Drive in White Rock = \$3,998,323

Price		Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$3,998,323							
Round up								
Round up again								
Round down								
Round down again								



5-bed, 7-bath house in White Rock, right near the pier = \$4,998,998

Price		Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$4,998,998							
Round up								
Round up again								
Round down								
Round down again								

For each of these homes for sale listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart.



5-bed, 4-bath house, on 3.5 acres in South Surrey, near Douglas \$3,489,898

Price		Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$3,489,898							
Round up								
Round up again								
Round down								
Round down again								



7-bed, 8-bath house on Marine Drive in White Rock = \$7,980,770

Price		Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$7,980,770							
Round up								
Round up again								
Round down								
Round down again								



6-bed, 6-bath house on Crescent Drive near Crescent Beach = \$6,880,800

Price		Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$6,880,800							
Round up								
Round up again								
Round down								
Round down again								

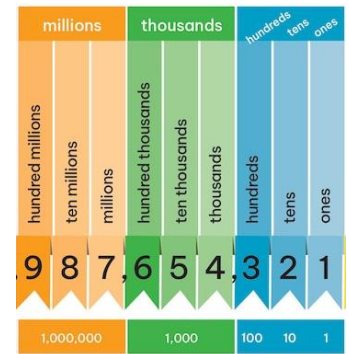


6-bed, 8-bath house in White Rock, on Marine Drive = \$7,777,777

Price		Millions	Hundred Thousands	Ten Thousands	Thousands	Hundreds	Tens	Ones
	\$7,777,777							
Round up								
Round up again								
Round down								
Round down again								

Ten Millions

Ten millions are the 1st, of an 8-digit number.



It's hard to imagine what ten million dollars looks like. Check out these most expensive selling cars ever. #1 sold for over a hundred million dollars (not on this page).



1962 Ferrari 250 GT.
Sold for \$48,405,000

[illegible]

1962-3 Ferrari 250 GT0.
Sold for \$38,115,115

[illegible]

1957 Ferrari 315/335S.
Sold for \$35,711,359

[illegible]

For each of these homes for sale listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart.



12-bed, 18-bath house in LA
\$79,799,999

[illegible]

8-bed, 11-bath house in LA =
\$15,545,445

[illegible]

5-bed, 8-bath house in LA =
\$14,995,995

[illegible]

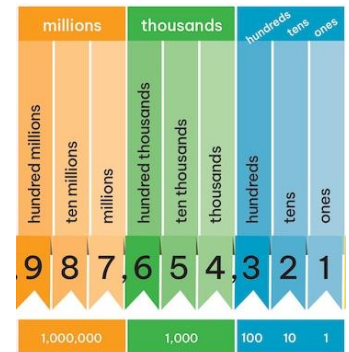
5-bed, 7-bath house in LA =
\$11,498,480

[illegible]

Hundred Millions

Hundred millions are the 1st, of a 9-digit number. Another 100 million, after 900,000,000, and you would get a billion!

100,000,000	One hundred million
200,000,000	Two hundred million
300,000,000	Three hundred million
400,000,000	Four hundred million
500,000,000	Five hundred million
600,000,000	Six hundred million
700,000,000	Seven hundred million
800,000,000	Eight hundred million
900,000,000	Nine hundred million



For each of these homes for sale listed below, write out the price in the place value chart. THEN, round the number TWO DIFFERENT WAYS, and fill out the place value chart.



1955 Mercedes-Benz 300 SLR Uhlenhaut Coupé.
Most expensive car ever sold.

\$143,000,000

[illegible]

Massive house in LA

[illegible]

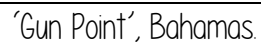


Rangyai island, in Thailand.
110 acres.
\$166,660,660

An aerial photograph of a tropical island, likely in the Caribbean. The island features a large resort complex with numerous white buildings and a marina filled with sailboats. The surrounding water is a vibrant blue, transitioning from shallow turquoise near the shore to deep blue further out. In the background, another smaller island is visible under a bright blue sky with scattered white clouds.

'Grand Scrub'. British Virgin Islands.
170 acres.
\$454,437,285

[illegible]



\$123,233,333

An aerial photograph of a tropical island, likely in the Pacific. The island is dark and forested, with a small strip of white sand beach visible on its western side. The water around the island is a vibrant turquoise, indicating a shallow reef flat, and transitions to a deep blue further out. A prominent coral reef runs along the coast, with several small islets and reefs visible. The sky is filled with large, white, fluffy clouds, and the overall scene is bright and sunny.

'Petit Nevis', 71 acres, Caribbean.

\$868,888,686

'Pepin Island', New Zealand, 1280 acres

\$548,472,615

[illegible]