

## To know how to round any integer

1 Round 6,541,009 to the nearest:

a 10,000

b 100,000

c 1,000,000

d Write a rule for rounding in general.

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2 Write five number that round to the given number when rounded to the nearest 100,000.

a 1,200,000

b 700,000

c 0

d Prove your answers to c are correct.

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3 a These number have missing digits. Each number rounds to 370,000 when rounded to the nearest 10,000.

Give all the possible missing digits.

36.....,995

3.....3,995

37.....,995

b James says, "My number is 2,450 when rounded the nearest 10." Sara says, "My number is 3,000 when rounded to the nearest 1,000." What is the smallest possible difference between their two numbers?

c Sam says, "My number is 250,000 when rounded to the nearest ten thousand." Rachel says, "My number is 1,000,000 when rounded to the nearest million." What is the greatest possible difference between their two numbers?

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Question Number	Question	Answer
1	a to c) Round 6,541,009 to the nearest... d) Write a rule for rounding in general.	a) 6,540,000 b) 6,500,000 c) 7,000,000 d) Sentence stem: When rounding to a power of ten, the digit to the right of the place value you are rounding to determines if you round up or down.
2	a to c) Write five numbers that round to the given number when rounded to the nearest 100,000. d) Prove your answers to c are correct.	Answers will vary. Example answers: a) 1,200,001 and 1,199,999 and 1,230,000 b) 700,200 and 749,999 and 699,999 c) Any number below 50,000 e.g. 49,999 and 300 and 478,992
3	a) Give all the possible missing digits. b) What is the smallest possible difference between their two numbers? c) What is the greatest possible difference between their two numbers?	a) 5,6,7,8,9 7 0,1,2,3,4 b) The smallest possible difference is 46, because Sara could have 2,500 and James could have 2,454. $2,500 - 2,454 = 46$ d) Sam could have the number 245,000; the furthest whole number that rounds up to 1,000,000 is 999,999. So, the greatest possible difference is $999,999 - 245,000 = 754,999$