

Word Problems

11 place value and rounding questions to develop reasoning and problem solving skills

Grade 3

Questions

Name: Date:

1 Look at these numbers:

Which of the numbers would you say if you:

- a started from the number 150 and counted up in 10s?
- b started on the number 150 and counted up in 25s?
- c started on the number 150 and counted up in 100s?

2 Complete the table below to find 1,000 more and 1,000 less than the actual number.

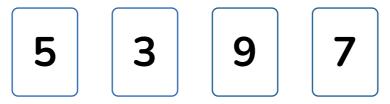
1,000 less	Number	1,000 more
2,011	3,011	4,011
231		
	3,356	
		6,987
		2234
	4,555	

3	Cullen wrote the following equation, leaving some blanks:
	0 x = 240

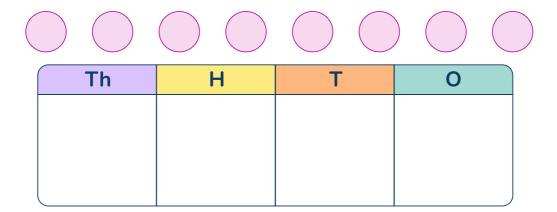
Complete the equation in 3 different ways.

Answer 1	Answer 2	Answer 3
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I have four digit cards.I can only use each digit card once when making a number.



- a What is the largest number I can make?
- b Round the number to the nearest 100.
- Amjit has 8 counters to make different numbers using the place value chart below.



Can you help Amjit identify:

- a The smallest 4-digit number he can make that has at least one counter in each column of the chart?
- b Round the number to the nearest 10.

6	Eva makes and sells bracelets. She is packing them in boxes.
	Every time she reaches 70 bracelets, she starts a new box.
	If she uses 6 boxes, how many bracelets does she have in total?

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- 7 Leo has one set of 0 to 9 digit cards (0, 1, 2, 3, 4, 5, 6, 7, 8, 9).
 He wants to show the answers to these calculations using the digit cards.
 Which of the calculations can he NOT show using the digit cards? Why?
 - a) 50 more than 95
 - b) 100 less than 100
 - c) 300 more than 590
 - d) 10 less than 109



8 Some friends have been playing a computer game. They recorded the points they got:

Thomas: 3,154

Andi: 4,153

Jane: 3,145

Petra: 3,514

Round their points to the nearest 10.

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9	A store had 1,589 shirts. The	y sold 781 shirts.
	Round the number of shirts th	ne store had and the number of shirts sold to the
	nearest hundred, then use the	e numbers to estimate the answer.
	The store has about	shirts now.

- Using the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 once in each number, make the following:
 - a The smallest odd 4-digit number.
 - b The smallest even 4-digit number.
 - c The largest odd 4-digit number.
 - d The largest even 4-digit number.

Challenge Question!

When this 4-digit number is rounded to the nearest hundred, the sum of the digits is 11. The number rounded to the nearest thousand is 8,000. If the tens digit is 1 and the ones digit is triple the size of the tens digit, what is the number?

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Answers

Question number	Question	Answers	Standard
1	Look at these numbers: 400, 225, 135, 990, 300, 345, 600, 880, 775, 100 Which of the numbers would you say if you: a) started from the number 150 and counted up in 10s? b) started on the number 150 and counted up in 25s? c) started on the number 150 and counted up in 100s?	a) 400, 990, 300, 600, 880 b) 400, 225, 300, 600, 775 c) Trick question - you would not say any of the numbers	Extending 2.NBT.A.2
2	Complete the table below to find 1,000 more and 1,000 less than the actual number.	Row 2: 231; 1,231; 2,231 Row 3: 2,356; 3,356; 4,356 Row 4: 4,987; 5,987; 6,987 Row 5: 234; 1,234; 2,234 Row 6: 3,555; 4,555; 5,555	Extending 2.NBT.B.8
3	Cullen wrote the following equation, leaving some blanks:0 x = 240 Complete the equation in 3 different ways.	30 x 8, 80 x 3, 60 x 4 40 x 6, 240 x 1, 10 x 24 **120 x 2 = 240 **20 x 12 = 240 **These answers are also possible, but go beyond the standard	3.NBT.A.3
4	I have four digit cards. I can only use each digit card once when making a number. (5) (3) (9) (7) a) What is the largest number I can make? b) Round the number to the nearest 100.	a) 9,753 b) 9,800	3.NBT.A.1

Question number	Question	Answers	Standard
5	Amjit has 8 counters to make different numbers using the place value chart below. (see diagram) Can you help Amjit identify: a) The smallest 4-digit number he can make that has at least one counter in each column of the chart? b) Round the number to the nearest 10.	a) 1,115 b) 1,120	3.NBT.A.1
6	Eva makes and sells bracelets. She is packing them in boxes. Every time she reaches 70 bracelets, she starts a new box. If she uses 6 boxes, how many bracelets does she have in total?	70 x 6 = 420 Solved using place value reasoning or properties of operations	3.NBT.A.3
7	Leo has one set of 0 to 9 digit cards (0, 1, 2, 3, 4, 5, 6, 7, 8, 9). He wants to show the answers to these calculations using the digit cards. Which of the calculations can he NOT show using the digit cards? Why? a) 50 more than 95 b) 100 less than 100 c) 300 more than 590 d) 10 less than 109	10 less than 109 as this would be 99 and he only has one 9 digit card.	3.NBT.A.2

Question number	Question	Answers	Standard
8	Some friends have been playing a computer game. They recorded the points they got: Thomas: 3,154 Andi: 4,153 Jane: 3,145 Petra: 3,514 Round their points to the nearest 10.	Thomas: 3,150 Andi: 4,150 Jane: 3,150 Petra: 3,510	3.NBT.A.1
9	A store had 1,589 shirts. They sold 781 shirts. Round the number of shirts the store had and the number of shirts sold to the nearest hundred, then use the numbers to estimate the answer.	1,600 – 800 = 800 The store has about 800 shirts now.	3.NBT.A.1 3.NBT.A.2
10	Using the digits 0, 1, 2, 3, 4, 5, 6, 7, 8 and 9 once in each number, make the following: a) The smallest odd 4-digit number b) The smallest even 4-digit number c) The largest odd 4-digit number d) The largest even 4-digit number	a) 1,023 b) 1,024 c) 9,875 d) 9,876	Extending 2.OA.C.3 and 2.NBT.A.1

Question number	Question	Answers	Standard
Challenge Question	When this 4-digit number is rounded to the nearest hundred, the sum of the digits is 11. The number rounded to the nearest thousand is 8,000. If the tens digit is 1 and the ones digit is triple the size of the tens digit, what is the number?	8,313	3.NBT.A.1

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