4th & 5th Grade Math with Math Dad and Science Mom

Place Value and Whole Numbers

Objectives: 4.NBT.A.1, 4.NBT.A.2

Place Value, Saying a number out loud. Multiplying and dividing by 10. Decompose it into parts.

Warm-up Problem: Use the numbers below to make the number **12** by combining them with appropriate mathematical symbols. You can rearrange them in any way you want, but be sure to use all 4 numbers.

4, 4, 8, 6

1. How do we say the number 5,288,917,843,335,881?
   5 quadrillion, 288 trillion, 917 billion, 843 million, 335 thousand, 881
2. How do we say the number 83,243,765,432?
   83 billion, 243 million, 765 thousand, 432.
3. How do we say the number 626,490,000,156,712,154?
   626 quadrillion, 490 trillion, 156 million, 712 thousand, 154
4. Decompose the number 3,576 into a sum of parts.
   3,576 = 3000 + 500 + 70 + 6.
5. Decompose the number 104,329 into a sum of parts.
   104,329 = 100,000 + 4,000 + 300 + 20 + 9.
6. Multiply the number 457 by 10.
   457 × 10 = 4,570.
7. Divide the number 2,440 by 10.
   2,440 ÷ 10 = 244

Recap Problems:

1. How do we say the number 62,305,956,411,042,333?
   62 quadrillion, 305 trillion, 956 billion, 411 million, 42 thousand, 333.
2. Decompose the number 36,871 into a sum of parts.
   36,871 = 30,000 + 6000 + 800 + 70 + 1.
3. Multiply the number 5,892 by 10.
   5,892 × 10 = 58,920.
4. Divide the number 657,360 by 10.
   657,360 ÷ 10 = 65,736.

1. How do we say the number 56,702,055,128?

   56 billion, 702 million, 55 thousand, 128.

2. How do we say the number 909,611,142,890,304?

   909 trillion, 611 billion, 142 million, 890 thousand, 304.

3. How do we say the number 78,800,000,000,361,000?

   78 quadrillion, 800 trillion, 361 thousand.

4. Decompose the number 3,732 into a sum of parts.

   $3,732 = 3,000 + 700 + 30 + 2.$

5. Decompose the number 3,141,592 into a sum of parts.

   $3,141,592 = 3,000,000 + 100,000 + 40,000 + 1000 + 500 + 90 + 2.$

6. Decompose the number 6,391,045 into a sum of parts.

   $6,391,045 = 6,000,000 + 300,000 + 90,000 + 1,000 + 40 + 5.$

7. Which digit of 845,219 is in the 10-thousands place?

   ↑ There are 4 ten-thousands

8. Which digit of 83,390 is in the hundreds place?

   ↑ There are 3 hundreds

9. Which digit of 468 is in the tens place?

   ↑ There are 6 tens.

Challenge Problem: How do we say the number 12,345,678,909,099,876,543,210

12 sextillion, 345 quintillion, 678 quadrillion, 909 trillion, 99 billion, 876 million, 543 thousand, 210.

Rounding and Comparing Whole Numbers

Objectives: 4.NBT.A.2, 4.NBT.A.3

Comparing whole numbers and rounding whole numbers.

Warm-up Problem: Use the numbers below to make the number **10** by combining them with appropriate mathematical symbols. You can rearrange them in any way you want, but be sure to use all 4 numbers.

3, 5, 2, 2

1. Round each number below to the nearest 10, 100, 1,000, and 100,000.

Round to the nearest	10	100	1,000	100,000
77	80	100	0	0
123	120	100	0	0
30,219	30,220	30,200	30,000	0
4,444	4,440	4,400	4,000	0
524,288	524,290	524,300	524,000	500,000
12,345,678	12,345,680	12,345,700	12,346,000	12,300,000

2. Compare each pair of numbers below by supplying the correct sign (<, >, or =).

344 __<__ 433
12,388 __>__ 12,299
3,213 __<__ 6,512
812,773 __>__ 812,601
524,288,378 __>__ 524,239,217
12,345,678 __>__ 9,266,404

3. Round to the nearest 10: 34,468 ≈ 34,470
4. Round to the nearest 10,000: 678,325 ≈ 680,000
5. Round to the nearest 10,000: 45,613,043 ≈ 45,610,000
6. Round to the nearest 100: 57,692 ≈ 57,700
7. Round to the nearest 1,000,000: 484,352,221 ≈ 484,000,000
8. Compare each pair of numbers below by supplying the correct sign (<, >, or =).

64 __>__ 46
1,338 __=__ 1,338
7,658 __>__ 6,442
810,453 __<__ 810,621
5,324,378 __>__ 5,315,217
127,888,345,678 __<__ 127,889,266,404

1. Round each number below to the nearest 10, 100, 10,000, and 1,000,000.

Round to the nearest	10	100	10,000	1,000,000
655	660	700	0	0
19,047	19,050	19,000	20,000	0
666,392	666,390	666,400	670,000	1,000,000
8,777,777	8,777,780	8,777,800	8,780,000	9,000,000
909,445,534	909,445,530	909,445,500	909,450,000	909,000,000
87,878,787	87,878,790	87,878,800	87,880,000	88,000,000

2. Compare each pair of numbers below by supplying the correct sign (<, >, or =).

545 ___<___ 611

32,355 ___>___ 32,349

183,213 ___<___ 187,902

43,773 ___=___ 43,773

668,378,321 ___>___ 668,374,689

839,938 ___<___ 389,892,121

16,121,456 ___<___ 16,121,546

34,678,318 ___<___ 43,890,405

3. Round to the nearest 100: 35,642 ≈ 35,600

4. Round to the nearest 10,000: 127,313 ≈ 130,000

5. Round to the nearest 1,000: 57,612,021 ≈ 57,612,000

6. Round to the nearest 100: 89,512 ≈ 89,500

7. Round to the nearest 1,000,000: 834,705,252 ≈ 835,000,000

Challenge Problem: What am I? 544

- I am a 3 digit number.
- When rounding to the nearest 10, I round to 540.
- If you add 6 to me and then round to the nearest 100, you get 600.