Math Study Guide : Answer Key

Numbers to 100 000



How many ones are in 10? (**10)**

How many tens are in 100? **(10)** In 1000? **(100)**

How many hundreds are in 1000? **(10)**

How many one cubes would you need to make 10 000? **(10 000)**

How many ten rods? **(1000)**

How many hundred flats? **(100)**

How many thousand cubes? **(10)**

Exploring One Million

How many $10 bills would it take to make $1 million dollars? **(100 000)**

How many $100 bills? **(10 000)**

How many $10 bills would it take to make $864 000? **(86 400)**

How many $100 bills? **(8 640)**

How many $1000 bills? **(864)**

Copy and Complete:

999 999 – 2 = **9 9 9 9 9 7**

1 000 000 – 500 000 = \_ \_ \_ \_ \_ \_ \_ **(500 000)**

750 000 + \_ \_ \_ \_ \_ \_ = 1 000 000 **(250 000)**

10 X \_ \_ \_ \_ \_ \_ \_ = 1 000 000 **(100 000)**

4 X \_ \_ \_ \_ \_ \_ \_ = 1 000 000 **(250 000)**

1 000 000 ÷ \_ \_ = 500 000 **(2)**

Representing Numbers

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 50 300 | 920 000 | 293 000 | 30 000 | 5231 |
| Ten Thousand | **5.03** | **92** | **29.3** | **3** | **0.5231** |
| Thousand | **50.3** | **920** | **293** | **30** | **5.231** |
| Hundreds | **503** | **9 200** | **2 930** | **300** | **52.31** |
| Tens  | **5030** | **92 000** | **29 300** | **3 000** | **523.1** |

Write these numbers in Expanded Form:

1. 67 532: **60 000 + 7 000 + 500 + 30 + 2**
2. 1 000 000: **1 000 000**
3. 640 023: **600 000 + 40 000 + 20 + 3**
4. 8 842 120: **8 000 000 + 800 000 + 40 000 + 2 000 + 100 + 20**

Write these numbers in Standard Form:

1. 600 000 + 20 000 + 50 + 7 = \_ \_ \_ \_ \_ \_ **(620 057)**
2. 4 000 000 + 80 000 + 9 = **4 080 009**
3. 7 000 000 + 600 000 + 1 000 + 500 + 20 + 9 = **(7 601 529)**
4. 1 + 300 000 + 20 + 5 000 000 + 600 + 6 000 = **5 306 621**
5. 30 + 400 000 + 20 000 + 900 + 4 000 000 + 2 + 3 000 = **(4 423 932)**

Greater Than, Less Than, or Equal to

1. 35 937 ˃ 35 397
2. 272 456 ˃ 227 456
3. 456 123 = 456 123
4. 975 345 ˂ 985 346

Estimating Sums

Front- end rounding

**11** 090 + **10**651 is about **10 000 + 10 000 = 20 000**

Compatible Numbers

Write: 11 090 + 10651

**As: 11 100 + 10 650 = 21 750**

Compensation

11 090 + 10651 + 10 320 + 9955 + 8465

**11 000 + 11 000 + 10 000 + 10 000 + 8000 = 50 000**

(round↓) (round↑) (round↓) (round↑) (round ↑ or ↓)

Use any of the strategies on the other page, once:

1. 64 985 + 26 712

**Front End Rounding: 60 000 +** **30 000 = 90 000**

**Compatible Numbers ( Any way THEY want to make it compatible) my example is :**

**65 000 + 26 700 = 91 700**

**Compensation: 60 000 + 30 000 = 90 000**

1. 87 632 + 11 327

**Front End Rounding: 90 000 +** **10 000 = 100 000**

**Compatible Numbers ( Any way THEY want to make it compatible) my example is :**

**87 600 + 11 300 = 98 900**

**Compensation: 90 000 (round up) + 10 000 (round down)= 100 000**

1. 7 492 + 10 823 + 82 531

**Front End Rounding: 7000 + 10 000 + 80 000 = 97 000**

**Compatible Numbers ( Any way THEY want to make it compatible) my example is :**

**7 400 + 10 000 + 82 500 = 99 900**

**Compensation: (7 000 or 8 000) + 10 000 + 80 000 = 98 000 or 97 000**

Using Bench Marks to Estimate

The longest country line dance had 6421 people. What is the closest bench mark to 1000.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |

**6400 6420 6450 6500**

Estimating Differences ( trying to find a closer estimate )

**A variety of strategies can be used which will lead to different answers than mine.**

1. 6732 – 3624 = **6730 – 3620 = 3110**
2. 8042 – 4261 = **8000 – 4300 = 3700**
3. 9421 – 6428 = **9400 - 6400 = 3000**
4. 5247 – 4420 = **5200 – 4000 = 1200**
5. 6029 – 2999 = **6000 – 3000 = 3000**

Using Estimation to Check Answers

**Again any of the strategies can be used which will lead to different answers that mine.**

You are required to answer the question regularly and then answer the question using an estimation strategy.

1. 5842 – 3693 = **5842 – 3693 = 2149**

**6000-4000 = 2000**

**5800-3700 = 2100**

**5840 -3690 = 2150**

1. 3542- 1475 = **3542 – 1475 = 2067**

**4000 – 1000 = 3000**

**3500 – 1400 = 2100**

**3540 – 1470 = 2070**

1. 7327 – 4021 = **7327 – 4021 = 3306**

**7000- 4000 = 3000**

**7300 – 4000 = 3300**

**7320 – 4020 = 3300**

1. 8421 + 5425 = **8421 + 5425 = 13846**

**8000 + 5000 = 13000**

**8400 + 5400 = 6200**

**8420 + 5420 = 13840**

1. 6492 + 9309 = **6492 + 9309 = 15 801**

**6000 + 9000 = 15000**

**6400 + 9300 = 15 700**

**6490 + 9300 = 15 790**

1. 4326 + 8219 = **4326 + 8219 = 12 545**

**4000 + 8000 = 12000**

**4300 + 8200 = 12500**

**4320 + 8210 = 12530**