[11-04-04-T11]

Dividing by Tens, Hundreds or Thousands

Dividing by tens means dividing by a certain number of tens. For example, when we divide by 30, we divide by *three* tens. When we divide by 70, we divide by *seven* tens. The same idea holds for dividing by hundreds or thousands. When we divide by 400, we divide by *four* hundreds. When we divide by 9000, we divide by *nine* thousands.

We can use these ideas to simplify our work when we divide by tens, hundreds or thousands.

■ **Examples.**

[1] $20 \div 400$.

Think: 20 divided by 4 is 5, so 20 divided by *four hundreds* is 0.05.

Write: $20 \div 400 = 5 \div 100 = 0.05$

[2] $12 \div 300$.

Think: 12 divided by 3 is 4, so 12 divided by *three hundreds* is 0.04.

Write: $12 \div 300 = 4 \div 100 = 0.04$

[3] $3.2 \div 80$.

Think: 3.2 divided by 8 is 0.4, so 3.2 divided by *eight tens* is 0.04.

Write: $3.2 \div 80 = 0.4 \div 10 = 0.04$

[4] $65 \div 5000 = 13 \div 1000 = 0.013$

[5] $624 \div 3000 = 208 \div 1000 = 0.208$

[6] $4.2 \div 600 = 0.7 \div 100 = 0.007$

[7] $22.2 \div 200 = 11.1 \div 100 = 0.111$

[8] $22.2 \div 2000 = 11.1 \div 1000 = 0.0111$

[9] $6.4 \div 80 = 0.8 \div 10 = 0.08$

■ **Practice. (Answers on back.)**

[1] $77 \div 70 =$ [ ] ÷ [ ] = [ ]

[2] $36 \div 600 =$ [ ] ÷ [ ] = [ ]

[3] $32 \div 80 =$ [ ] ÷ [ ] = [ ]

[4] $3.2 \div 40 =$ [ ] ÷ [ ] = [ ]

For the rest of these you *must* write the intermediate steps as is shown in #5.

[5] $82 \div 200 = 41 \div 100 = 0.41$

[6] $48 \div 6000$

[7] $144 \div 60$

[8] $812 \div 400$

[9] $48 \div 6000$

[10] $6.4 \div 800$

[11] $2.8 \div 700$

[12] $18 \div 90$

[13] $1.6 \div 400$

[14] $70 \div 5000$

[15] $260 \div 2000$

[16] $9.6 \div 600$

[17] $12.4 \div 4000$

[18] $5.5 \div 500$

[19] $72 \div 6000$

[20] $38 \div 20$

[21] $4.8 \div 600$

[22] $6.2 \div 2000$

[23] $4.9 \div 70$

[24] $75 \div 500$

[25] $728 \div 7000$

■ Answers

[1] [11] ÷ [10] = [1.1]

[2] [6] ÷ [100] = [0.06]

[3] [4] ÷ [10] = [0.4]

[4] [0.8] ÷ [10] = [0.08]

[5] 0.41

[6] 0.008

[7] 2.4

[8] 2.03

[9] 0.008

[10] 0.008

[11] 0.004

[12] 0.2

[13] 0.004

[14] 0.014

[15] 0.13

[16] 0.016

[17] 0.0031

[18] 0.011

[19] 0.012

[20] 1.9

[21] 0.008

[22] 0.0031

[23] 0.07

[24] 0.15

[25] 0.104