

## Student Book

## - 4th Grade | Unit 5

## MATH 405 <br> DIVISION AND MEASUREMENTS

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## s <br> Alpha Omega pUblications

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## 1. DIVISION, ADDITION, SUBTRACTION, MULTIPLICATION

## Objectives

Read these objectives. When you have completed this section, you should be able to:

- Solve division problems.
$\square$ Review addition, subtraction, and multiplication.

Division means to separate into equal parts.
Addition, subtraction, and multiplication have facts that you have learned. Division also has facts to learn.


You will need objects for counting.
1.1 Use 12 objects to make 3 equal groups.
a. How many objects are there in each group? $\qquad$
b. We can say that 12 divided by 3 is equal to $\qquad$ .

Use 12 objects to make 4 equal groups.
c. How many objects are there in each group? $\qquad$
d. We can say that 12 divided by 4 is equal to $\qquad$ .

Division problems have names.

| $12 \div 3=4$ | $\begin{gathered} 12 \\ 3 \\ \div \\ 4 \end{gathered}$ | is the dividend. is the divisor. is the division sign. is the quotient. |
| :---: | :---: | :---: |
| $12 \div 4=3$ | 12 | is the dividend. |
|  | 4 | is the divisor. |
|  | $\div$ | is the division sign. |
|  | 3 | is the quotient. |

## Complete this activity.

1.2 Use 15 objects to make 5 equal groups.
a. How many objects are there in each group? $\qquad$
b. We can say that $15 \div 5=$ $\qquad$ .

Use 15 objects to make 3 equal groups.
c. How many objects are there in each group? $\qquad$
d. We can say that $15 \div 3=$ $\qquad$ .

Addition and subtraction make a family of facts.
Multiplication and division make a family of facts.
You have learned two families of facts already.
3, 4,12
$3 \times 4=12$
$4 \times 3=12$
$12 \div 3=4$
$12 \div 4=3$
3,5,15
$3 \times 5=15$
$5 \times 3=15$
$15 \div 3=5$
$15 \div 5=3$

If you know your multiplication facts, you also know your division facts.

## Complete these activities.

1.3 Write the missing numbers to complete the family of facts.
a. $2,4,8$
$2 \times 4=$ $\qquad$ $4 \times 2=$ $\qquad$ $8 \div 4=$ $\qquad$ $8 \div 2=$ $\qquad$
b. $3,7,21$
$3 \times 7=$ $\qquad$ $7 \times 3=$ $\qquad$ $21 \div 3=$ $\qquad$ $21 \div 7=$ $\qquad$
c. $5,8,40$
$5 \times 8=$ $\qquad$ $8 \times 5=$ $40 \div 5=$ $\qquad$ $40 \div 8=$ $\qquad$
d. $6,9,54$
$6 \times 9=$ $\qquad$ $9 \times 6=$ $\qquad$ $54 \div 6=$ $\qquad$ $54 \div 9=$ $\qquad$
e. $7,8,56$
$7 \times 8=$ $\qquad$ $8 \times 7=$ $\qquad$ $56 \div 7=$ $\qquad$ $56 \div 8=$ $\qquad$
f. $4,5,20$
$4 \times 5=$ $\qquad$ $5 \times 4=$ $\qquad$ $20 \div 4=$ $\qquad$ $20 \div 5=$ $\qquad$
1.4 Write the number in digits. Circle it in the puzzle. (The answers may appear in the puzzle horizontally, vertically, or diagonally.)
a. seventy-eight thousand, three hundred eighteen $\qquad$
b. thirty-one thousand, eight hundred twenty-nine $\qquad$
c. seven thousand, seventy-nine $\qquad$
d. four thousand, three hundred twenty-one $\qquad$
e. seven hundred fifty-one $\qquad$
f. eight thousand, twenty-five

| 2 | 7 | 6 | 3 | 9 |
| :--- | :--- | :--- | :--- | :--- |
| 4 | 8 | 0 | 2 | 5 |
| 9 | 3 | 8 | 7 | 6 |
| 4 | 1 | 2 | 5 | 9 |
| 3 | 8 | 0 | 1 | 6 |

Remember to follow the rules for multiplication.

1. Multiply from right to left.
2. If the answer has two digits, write one digit and carry the other.

22
367 Multiply. $4 \times 7$ ones $=28$ ones.
$\frac{\times 4}{1,468} \quad$ Write the 8 ones in the ones' place and carry 2 tens.
Multiply. $4 \times 6$ tens $=24$ tens. Add the 2 tens $=26$ tens.
Write the 6 tens in the tens' place and carry 2 hundreds.
Multiply. $4 \times 3$ hundreds $=12$ hundreds.
Add the 2 hundreds $=14$ hundreds.

## Complete this activity.

1.5 Find the products. Carry when necessary.
a.

| 342 |
| ---: |
| $\times \quad 2$ |


| 436 |
| ---: |
| $\times \quad 3$ |

218
723
$\begin{array}{r}\times \quad 2 \\ \hline\end{array}$
$\times 4$
$\times$
$\begin{array}{r}2 \\ \times \quad \\ \hline\end{array}$
b.

| 525 |
| ---: |
| $\times \quad 3$ |

483
242
528
$\begin{array}{r} \\ \times \quad 3 \\ \hline\end{array}$

| $\times \quad 6$ |
| :--- |

$\begin{array}{r}2 \\ \times \quad 5 \\ \hline\end{array}$
$\begin{array}{r}5 \\ \times \quad 4 \\ \hline\end{array}$
C. $\begin{array}{r}235 \\ \times \quad 8 \\ \hline\end{array}$
736
624
416
$\begin{array}{r}\times \quad 8 \\ \hline\end{array}$
$\begin{array}{r}\times \quad 4 \\ \hline\end{array}$

$\begin{array}{r}\times \quad 5 \\ \hline\end{array}$
d.

236
582
$\begin{array}{r}\times 7 \\ \times \\ \hline\end{array}$
$\begin{array}{r} \\ \times \quad 3 \\ \hline\end{array}$
$\begin{array}{r}\times 6 \\ \hline\end{array}$

To check problems in ...

| addition ... |  | subtraction ... |  |
| :---: | :---: | :---: | :---: |
|  | 982 | Subtract. | 835 |
|  | 236 | Add the difference | - 476 |
| Add down. | $\begin{array}{r} \\ +\quad 746 \\ \hline\end{array}$ | to the subtrahend. | + 359 |
| Add up. | 982 | The answer is the minuend. | 835 |

## $\leqslant$ Complete these activities.

1.6 Complete the problems. Check your answers.
a.

$\begin{array}{r}+324 \\ \hline\end{array}$
847
$\begin{array}{r}+332 \\ \hline\end{array}$

| +537 |
| :--- |

b.

| 1,763 |
| ---: |
| $+\quad 2,275$ |

6,892
9,420
2,163
$+\quad 2$
$\begin{array}{r}9,632 \\ +\quad \\ \hline\end{array}$
c.


850
695
$+$

- 325
- 249
$+$
d.

$\qquad$
1.7 Fill in the blanks with $>,<$, or $=$.
a. 18 $\qquad$ 12
24 $\qquad$ $8 \times 4$
b. 15 $\qquad$ 20 $\qquad$
C. $6+8$ $\qquad$ $7+7$
$3 \times 4$ $\qquad$ 20-9
d. $7 \times 5$ $\qquad$ $8 \times 4$
$3+6$ $\qquad$ 17-8
e. $6 \div 3 \quad 2 \times 1$
$37+8$ $\qquad$ 42-6
1.8 Write the money in digits. Solve the problem.


7 dimes \$
3 nickels
8 pennies

1.9 Circle the numbers that are in the ...
a. tens' place
256
5,349
7,554
b. one thousands' place
990,675
68,255
4, 621
c. ten thousands' place
76,305
803, 261
21, 306
1.10 Write the next three number words in each sequence.
a. thirty-five, thirty-six, thirty-seven, ...
$\qquad$ , $\qquad$ , $\qquad$ , ...
b. thirty-fifth, thirty-sixth, thirty-seventh, ...
$\qquad$
$\qquad$ , $\qquad$ , ...
1.11 Add 8 to each number.
$\qquad$
3
9 $\qquad$ 7 $\qquad$ 12 $\qquad$ 26 $\qquad$
1.12 Subtract 7 from each number.
16 $\qquad$ 14 $\qquad$ 17 $\qquad$ 25 $\qquad$ 9 $\qquad$
1.13 Multiply each number by 6 .
4 $\qquad$
0 $\qquad$
8 $\qquad$
10 $\qquad$ 7 $\qquad$
1.14 Write the correct time for each clock.

1.15 Kenneth finished his volleyball game at 4:30. Was this A.M. or P.M.?
$\qquad$
1.16 Write these numbers in number words.
a. 7,853 $\qquad$
b. 43,085 $\qquad$
c. 206,830 $\qquad$
1.17 Arrange in number order from smallest to largest.

| 305,670 | 350,760 | 670,760 | 607,760 | 376,760 | 377,670 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

1.18 Write the largest number possible using the digits $3,7,8,0,5,6$.
$\qquad$

Review the material in this section to prepare for the Self Test. The Self Test will check your understanding of this section. Any items you miss on this test will show you what areas you will need to restudy in order to prepare for the unit test.

## SELF TEST 1

Complete these activities (each answer, 1 point unless otherwise noted).
1.01 Write the correct terms.
$42 \div 7=6$
In this problem, 42 is the $\qquad$ 7 is the $\qquad$ , and 6 is the $\qquad$ .
1.02 Write the multiplication and division family of facts for ... 7,5,35
1.03 Write the numbers in digits.
a. fifty-four thousand, seven hundred eight
b. one hundred twenty thousand, forty-nine
1.04 Find the product.

| 326 |
| ---: |
| $\times \quad 483$ |
| $\times \quad 383$ |

1.05 Write the money in digits. Solve.

| 2 quarters | $\$$ | 4 dimes | $\$$ |
| ---: | :--- | ---: | :--- |
| 3 dimes |  | 5 nickels |  |
| 1 nickel | + | 8 pennies | + |
|  | $\$$ |  | $\$$ |

1.06 Write the next three number words in each sequence (this problem, 2 points).
a. forty-two, forty-three, forty-four, ...
$\qquad$
$\qquad$ , $\qquad$ , ...
b. forty-second, forty-third, forty-fourth, ...
$\qquad$ , $\qquad$ , $\qquad$ , ...
1.07 Write the time on the clock.

1.08 Jim finished his math assignment at 2:OO. Was this A.M. or P.M.?
1.09 Arrange in order from smallest to largest (this problem, 3 points).
293,467
923,467
423,967
342,776
324,776
293,647
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

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