

1. Consider the number 79 305 084 206.

- (a) Use words to write the number **seventy-nine billion, three hundred five million, eighty-four thousand, two hundred six**
(b) Write it in expanded form.

$$7 \cdot 10\,000\,000\,000 + 9 \cdot 1\,000\,000\,000 + 3 \cdot 100\,000\,000 + 5 \cdot 10\,000\,000 + 8 \cdot 10\,000 + 4 \cdot 1\,000 + 2 \cdot 100 + 6 \cdot 1$$

- (c) Round it to the nearest ten. **79 305 084 210**
(d) Round it to the nearest thousand. **79 305 084 000**
(e) Round it to the nearest ten thousand. **79 305 080 000**

2. The sides of a rectangle are 35 in and 18 in long.

- (a) Find the perimeter of the rectangle. Include units in your answer. **$P = 106$ in**
(b) Find the area of the rectangle. Include units in your answer. **$A = 630$ in²**

3. Consider the numbers: 5 712, 270, 275, 40 010, 3 150.

- (a) Find all numbers from the list that are divisible by 3. **5 712, 270, 3 150**
(b) Find all numbers from the list that are divisible by 4. **5 712**
(c) Find all numbers from the list that are divisible by 5. **270, 275, 40 010, 3 150**
(d) Find all numbers from the list that are divisible by 15. **270, 3 150**
(e) Find all numbers from the list that are divisible by 20. **none**

4. List all factors of 120. **1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 24, 30, 40, 60, 120**

5. Find the least common multiple of 216 and 96. **864**

6. Find the average of -13 , 54 , -29 , 14 , and -21 . **1**

7. Perform the indicated operations. Show all steps.

- (a) $4 - 3(5) - 7(-6) - 4(-5) =$ **51**
(b) $-5(-5) - 5(2) + 3 =$ **18**
(c) $3(-2) - |-3(3)| + 9 - 7(-2) =$ **8**
(d) $\frac{5(-5 + 3) + 7(-5 + 9) + 2}{3^2 - (2^2 - 2) \div (-2)} =$ **2**
(e) $-2 + (-2)^2 + (-2)^3 + (-2)^4 =$ **10**

8. Evaluate each of the following expressions if $a = -4$, $b = 2$, and $m = -3$.

- (a) $am - 2m =$ **18**
(b) $ma - m - a =$ **19**

(c) $|-b - a| + a = -2$

(d) $(a + b)^2 = 4$

(e) $a^2 + b^2 = 20$

9. Solve each of the following equations. Make sure to check your solution.

(a) $x + 8 = -3 \quad -11$

(b) $\frac{a}{-5} = -7 \quad 35$

(c) $y - 23 = -23 \quad 0$

(d) $-2b = 72 \quad -36$