

1. Use digits to write the number four hundred billion, three hundred seventy-one thousand, thirty-three.
2. The following number is written in expanded form. Write it in standard form.
$$2 \cdot 10\,000\,000 + 4 \cdot 10\,000 + 2 \cdot 100 + 1 \cdot 10 + 6 \cdot 1$$
3. Rounding.
 - (a) Round 12 730 295 to the nearest thousand.
 - (b) Round 12 730 295 to the nearest million.
4. The sides of a rectangle are 15 mi and 28 mi long.
 - (a) Find the perimeter of the rectangle. Include units in your answer.
 - (b) Find the perimeter and area of the rectangle. Include units in your answer.
5. Consider the following numbers: 720, 4281, 125, 222, 555 555
 - (a) Find all numbers from the list that are divisible by 5.
 - (b) Find all numbers from the list that are divisible by 3.
 - (c) Find all numbers from the list that are divisible by 15.
6. Find the sum of the prime numbers between 20 and 35.
7. List all the factors of 64.
8. Use the prime factorization method to find the least common multiple of 180 and 66.
9. Perform the following operations. Show all steps.
 - (a) $-2 + 6 + (-10) =$
 - (b) $-3 + (-4) + 7 =$
 - (c) $3 + (-2) + 9 + (-8) =$
10. Let $x = -1$, $y = -2$, and $z = 5$. Evaluate each of the following expressions.
 - (a) $2z - 2 + x + y =$
 - (b) $(z + x + y)^2 + 3(x + y + 2z) - 7 =$
 - (c) $\frac{x + y}{x - y} =$
 - (d) $\frac{2 - z}{z - 2} =$

11. Insert a $<$ or a $>$ sign between the numbers given to create a true statement.

(a) -2 -12

(b) -12 -2

12. Solve each of the following equations. Make sure to check your solutions.

(a) $x \cdot 2 = 72$

(b) $x + 31 = 68$

(c) $x - 15 = 90$

(d) $\frac{x}{7} = 4$

13. Is the number 11 a solution of the equation $x^2 - 72 + x = 6(x - 1)$?