EXTRA PRACTICE - Exercises

Unit I – The Structure of Mathematics
Part A – Mathematics as a Language
Lesson 3 – Translation of Mathematical Symbols

Translate the following English phrases into phrases with mathematical symbols.

1. One third of a number n, diminished by 8

2. The quotient of x and y, added to the product of, 4 and c

3. The sum of x and 6, is, 8 times x

4. Twice the number w, subtracted from the sum of a and b

5. 3 increased by 8 more than 7 times "y"

6. The sum of p and its cube, is equal to, q times n.

7. A number decreased by 10, is greater than -5.

8. Twice the product of m and n, is less than the square of q.

9. Negative three times a number, is at least 57.

10. The square of t, increased by r, is equal to, s to the second.

11. The sum of a number and 81, is greater than the product of negative three and that number.

12. Twice y, diminished by the square of y, is the same as x.

13. Twice a number, increased by 12, is 31 less than, three times the number.

14. The product of a, b and the square of c, is d.

15. A number increased by 2, is at most 6.

16. Twenty-seven decreased by the product of x and y, is greater than z.

17. One half of a number, increased by sixteen, is four less than, two thirds of the number.

18. Twice a number, added to eight, is more than, three times the number.

19. Five more than, two thirds of a number, is the same as, three less than, one half of the number.

20. Four more than, six times a number, is at most, five times the number, decreased by three.

21. Five eighths of a number, is three more than, half the number.

22. Four more than the quotient of a number and three is at least that number.

23. Five thirds of a number is no more than negative fifteen.

24. The product of a number and five, increased by eleven, is, thirty-one more than, three times the number.

25. One fifth of a number, plus five times that number, is the same as, seven times the number, less 18.

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Translate the following English phrases into phrases with mathematical symbols.

1. $\dfrac{1}{3} \cdot n - 8$

2. $4c + \dfrac{x}{y}$ $(4 \cdot c) + (x \div y)$

3. $x + 6 = 8x$

4. $(a + b) - 2w$

5. $3 + (7y + 8)$

6. $p + p^3 = q \cdot n$

7. $x - 10 > -5$

8. $2(mn) < Q^2$

9. $-3n \geq 57$

10. $t^2 + r = s^2$

11. $x + 81 > -3x$

12. $2y - y^2 = x$

13. $2n + 12 = 3n - 31$

14. $a \cdot b \cdot c^2 = d$

15. $n + 2 \leq 6$

16. $27 - x \cdot y > z$

17. $\dfrac{1}{2}n + 16 = \dfrac{2}{3}n - 4$

18. $8 + 2n > 3n$

19. $\dfrac{2}{3}n + 5 = \dfrac{1}{2}n - 3$

20. $6n + 4 \leq 5n - 3$

21. $\dfrac{5}{8}n = \dfrac{1}{2}n + 3$

22. $\dfrac{x}{3} + 4 \geq x$

23. $\dfrac{5}{3}n \leq {}^-15$

24. $5n + 11 = 3n + 31$

25. $\dfrac{1}{5}n + 5n = 7n - 18$