

**Unit 5:
Cumulative Review**

1. Simplify $3 + 8/2 + 60(5) + 1$

2. Simplify $3 + 8(2) + 60/5 + 1$

3. Simplify $-3(-7) - 5(6)/(-2)$

4. Simplify $-8/(6 - 8) + 1$

5. Evaluate $|z - x/2 + y|$ if $x = 6$, $y = 10$, $z = 15$

6. Simplify $\frac{a+b}{c-d}$ when $a = 20$, $b = 5$, $c = 9$, $d = 4$.

7. Simplify $(11x - (5/4)x)/(3/2)$

8. Find the solution to the equation $14x + 1 + 6x - 9 = 32$.

9. Solve $4(y + 2) - 5y = y + 12$

10. Use a unit multiplier to convert 26 nerds to geeks when it is known that exactly 13 nerds = 12 geeks.

11. Express “3y plus 5 is at least 5x minus 12” in mathematical symbols.

12. Determine the inequality solution to $4x - 6 > x - 1$. Express the answer both symbolically and as a graph on a number line.

13. From the expression “3 less than 10 times the weight”, define a variable and then write the expression algebraically.

14. The three sides of a triangle are $z + 9$, $z + 1$, and $z + 2$. If the perimeter of the triangle is 48, what is the value of z ?

*15. If the perimeter of a closed half circle is 37.09, what is the radius?

16. Bob sells used cars for a commission of 8%. What is the price of a car he sells if his commission is \$130?