

1. Add: $\frac{6}{fg} - \frac{4}{f^2} - \frac{3}{f+g}$

[1] _____

2. The average of the first 6 weights was 31 ounces. The average of the next 9 weights was 36 ounces. What was the overall average of the weights?

[2] _____

3. Add: $\frac{5}{c} + \frac{2}{c-d} - 4$

[3] _____

4. The average of the first 5 numbers was 28. The average of the next 10 numbers was 34. What was the overall average of the numbers?

[4] _____

Simplify. Write the answer with all positive exponents.

5.
$$\frac{x^6 y^4 z^0 (xy^0)^{-5} x^2 y^{-1} (z^{-2})^3}{x^2 (y^{-1})^0 xy^4 x^{-2} (z^{-1})^{-1}}$$

[5] _____

6. Simplify. Write the answer with all positive exponents. $\frac{-27x^{-1}y^{-2}(x^2)^{-2}y^{-3}x^2y^5}{(-3x^0)^2xy^{-2}(-3x^{-2}y^5)^0}$

[6] _____

7. Simplify. Write the answer with all exponents positive. $\left(\frac{4x^{-2}p^3}{y^{-5}}\right)^{-2}\left(\frac{y^4p^2}{x^2}\right)^{-4}$

[7] _____

8. Use six unit multipliers to convert 28,000 cubic inches to cubic meters.

[8] _____

9. Solve the system by the substitution method.

$$x = 3y + 5$$

$$5x + y = -39$$

[9] _____

10. Solve the system by the substitution method.

$$x = 6y + 9$$

$$8x + y = -75$$

[10] _____

Simplify:

11. $\frac{q+r}{\frac{1}{s}}$

[11] _____

Simplify:

$$12. \frac{\frac{e}{w}}{\frac{x}{w+e}}$$

[12] _____

$$13. \frac{\frac{u}{w}}{\frac{1}{u+v}}$$

[13] _____

$$14. \frac{\frac{c}{a}}{\frac{b}{a+c}}$$

[14] _____

Bonus!!!

15. Add. Write the answer with all exponents positive. $x^{-1}y + 6z^{-1}$

[15] _____