

1. Simplify:  $2(x - 3y) - 4(3x - y)$

1. \_\_\_\_\_

2. Evaluate  $\frac{x + 3y}{x^2 - 6y^2 - z^2}$  if  $x = -4$ ,  $y = -3$ , and  $z = -1$ .

2. \_\_\_\_\_

3. \_\_\_\_\_

3. Solve:  $7 - y = -2$

4. Solve:  $5(2t - 1) + 3(3t + 4) = 4(4t + 7)$

4. \_\_\_\_\_

5. \_\_\_\_\_

5. Simplify:  $(x - 5)(2x + 3)$

6. Simplify:  $(x - 8)^2$

6. \_\_\_\_\_

7. \_\_\_\_\_

7. Factor:  $x^2 - 25$

8. Factor:  $2a^2 + 13a - 7$

8. \_\_\_\_\_

9. Solve:  $y^2 - 5y + 6 = 0$

9. \_\_\_\_\_

10. \_\_\_\_\_

10. Simplify:  $(-5x^4)^3$

11. Simplify:  $\frac{12a^5b^6}{(2a^2b)^2}$

11. \_\_\_\_\_

12. \_\_\_\_\_

12. A restaurant can prepare 20 patties from 11 kg of ground beef. How much ground beef is needed for 500 patties?

13. \_\_\_\_\_

14. \_\_\_\_\_

13. Find the slope of the line through (5, 6) and (2, -3).

14. Find the y-intercept of the following line:  $x + 2y = 8$

15. Solve:  $\frac{12}{z-3} = \frac{15}{z+1}$

15. \_\_\_\_\_

16. Solve:  $\frac{y-1}{2} - \frac{y+1}{3} = 1$

16. \_\_\_\_\_

17. What percent of 30 is 24?

17. \_\_\_\_\_

18. \_\_\_\_\_

18. Express  $(-3y^{-3})^3$  in terms of positive exponents.

19. \_\_\_\_\_

20. \_\_\_\_\_

19. Simplify:  $\sqrt{175}$

21. \_\_\_\_\_

20. Solve:  $3x - 8 \geq x - 10$

22. \_\_\_\_\_

21. Solve:  $-2x < 6$

23. \_\_\_\_\_

22. Solve the following system of equation:  $5x - 4y = 9$   
 $3x + 2y = 1$

24. \_\_\_\_\_

23. Express in simplest form:  $\sqrt{27} - \sqrt{18} + \sqrt{50}$

24. Solve:  $\sqrt{x} = 9$