

\*\*\*No Calculator\*\*\*

**Solve the system of linear equations by substitution or elimination.**

1. $\begin{cases} y = 4x + 1 \\ 2x + y = 37 \end{cases}$	2. $\begin{cases} 3x - y = -5 \\ x + y = 9 \end{cases}$	3. $\begin{cases} -3x + 4y = 7 \\ 2x + y = -1 \end{cases}$
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**Find the slope of the line.** Use  $m = \frac{y_2 - y_1}{x_2 - x_1}$

4. (2, -3) and (-3, -2)	5. (6, -7) and (6, 3)
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**Write an equation of a line in point-slope form  $[y - y_1 = m(x - x_1)]$  and slope-intercept form  $[y = mx + b]$ .**

6. $m = -\frac{2}{3}; (6, -1)$  point-slope form:  slope-intercept form:	7. $m = 4; (-2, -10)$  point-slope form:  slope-intercept form:
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**Evaluate the radical expression.**

8. $\sqrt{(-4)^2 + 3^2}$	9. $\sqrt{(10 - 2)^2 + (-5 - 1)^2}$	10. $\sqrt{(13 - 11)^2 + (4 - 4)^2}$
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Simplify the radical expression.

11. $\sqrt{28}$	12. $\sqrt{50}$	13. $-3 \cdot \sqrt{16}$
14. $\frac{1}{5}\sqrt{200}$	15. $\sqrt{10} \cdot \sqrt{2}$	16. $\sqrt{\frac{121}{81}}$
17. $\frac{\sqrt{18}}{\sqrt{25}}$	18. $\frac{3}{\sqrt{7}}$	19. $\frac{9}{\sqrt{3}}$

Multiply.

20. $-4x(2x-6)$	21. $7x(2x^2-x+5)$
22. $(x-8)(x+4)$	23. $(2x+1)(5x-1)$

Factor each polynomial by greatest common factor.

24. $5x^2-25x$	25. $8a+2a^2$
26. $-8b^3+24b$	27. $3y^4+9y^2-15$

Factor each polynomial when a=1.

28. $x^2+8x+12$	29. $x^2-4x-5$	30. $x^2-12x+20$	31. $x^2+7x+12$
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