

Homework #1-14

Factor each expression.

① $25b^2 - 20b$

② $5t^2 - 5t - 10$

③ $27p^2 - 9p + 18$

④ $2x^2 - 19x + 24$

⑤ $x^2 + 3x + 2$

⑥ $81a^2 - 90a + 25$

⑦ $49w^2 - 4$

⑧ $x^2 - 4$

Solve each equation.

⑨ $8 + |2x + 1| = 1$

⑩ $\frac{|x - 5|}{2} = 5$

Graph the following and fill in the missing information.

⑪ $f(x) = -\frac{1}{2}(x - 2)^2 + 3$

vertex: _____, AOS: _____, min/max: _____ (circle one), domain: _____, range: _____

⑫ $y = 2(x + 1)^2 - 4$

vertex: _____, AOS: _____, min/max: _____ (circle one), domain: _____, range: _____

⑬ $y = -\frac{1}{3}|x + 2| + 4$

vertex: _____, AOS: _____, slope: _____

⑭ Solve by graphing. $\begin{cases} y < 4x \\ 3x + y \geq 5 \end{cases}$