

Algebra 2 Placement Test**Section 1**

Evaluate each expression below.

1. $5 - 3(x - 1)$ when $x = 7$
2. $4x^2 - 5x + 1$ when $x = -2$

Simplify each expression below.

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|----------------------------------|-----------------------|--------------------------------|
| 3. $y(y - 11)$ | 4. $(x + 6)(x - 3)$ | 5. $(y - 1)(y^2 + 2y + 1)$ |
| 6. $(\sqrt{2} \cdot \sqrt{3})^2$ | 7. $(7x^2)(x^4)(-5x)$ | 8. $\frac{4x^4 - x^3}{8x - 2}$ |

Solve each equation below.

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|--|------------------------------|----------------------------|
| 9. $6x + 7 = 31$ | 10. $3y + \frac{1}{4}y = 26$ | 11. $12(x - 1) = 8(x + 1)$ |
| 12. $\frac{1}{2y} - \frac{2}{3y} = -\frac{3}{4}$ | 13. $5[1 - 2(x + 2)] = 4x$ | |

Translate each problem below into an equation and solve.

14. Victoria and Margaret are 625 miles apart and traveling straight toward each other. If Victoria's speed is 55 mph and Margaret's speed is 70 mph, how many hours will it be before the two meet?
15. Mike, a Salvation Army bell ringer, has 5 fewer quarters than nickels in his cup. If Mike has \$5.95 in quarters and nickels, how many nickels does he have?