

1. **8.1** Solve the quadratic equations by completing the square

a.  $x^2 - 2x - 2 = 0$

b.  $x^2 + 3x - 2 = 0$

c.  $x^2 + 4x + 6 = 0$

d. **Bonus**  $3x^2 - 4x - 4 = 0$

2. **8.2** Use the quadratic formula to solve the following quadratic equations. I expect to see you follow these steps:
- Compute the discriminant. State the number and type of solutions.
  - Simplify the square root of the discriminant
  - Compute the quadratic formula and simplify. Leave any answers involving radicals in radical form.

a.  $x^2 - 12 = -11x$

b.  $x(x + 6) = 2$

c.  $3x^2 + 7x + 5 = 0$

d.  $3x^2 + 7x - 5 = 0$

3. **8.2** Given the diagram, approximate to the nearest foot how many feet of walking distance a person saves by cutting across the lawn, instead of walking on the sidewalk. Pythagorus is watching!

