Algebra II | Activity 0825 | Name:
Dr. Paul L. Bailey | Thursday, August 25, 2022

Problem 1. Solve $x^2 - 10x + 7 = 0$ by completing the square. Follow the given steps.

Step 0. Put it in standard form $ax^2 + bx + c = 0$. It already is, so just continue to Step 1.

Step 1. Divide both sides by a. Since a is already 1, just proceed to Step 2.

Step 2. Subtract c from both sides.

Step 3. Add the thing that completes the square to both sides.

Step 4. Factor the left hand side.

Step 5. Take the square root of both sides.

Step 6. Move the remaining constant to the left hand side.

Problem 2. Solve $2x^2 - 16x - 6 = 0$ by completing the square. Follow the given steps.

Step 0. Put it in standard form $ax^2 + bx + c = 0$. It already is, so just continue to Step 1.

Step 1. Divide both sides by a.

Step 2. Move the constant from the left to the right hand side.

Step 3. Add the thing that completes the square to both sides.

Step 4. Factor the left hand side.

Step 5. Take the square root of both sides.

Step 6. Move the remaining constant from the right to the left hand side.

Problem 3. Solve $3x^2 - 16x - 6 = 2x$ by completing the square. Follow the given steps.

Step 0. Put it in standard form $ax^2 + bx + c = 0$.

Step 1. Divide both sides by a.

Step 2. Move the constant from the left to the right hand side.

Step 3. Add the thing that completes the square to both sides.

Step 4. Factor the left hand side.

Step 5. Take the square root of both sides.

Step 6. Move the remaining constant from the right to the left hand side.

Problem 4. Solve $x^2 - x - 1 = 0$ by completing the square. Follow the given steps.

Step 0. Put it in standard form $ax^2 + bx + c = 0$.

Step 1. Divide both sides by a.

Step 2. Move the constant from the left to the right hand side.

Step 3. Add the thing that completes the square to both sides.

Step 4. Factor the left hand side.

Step 5. Take the square root of both sides.

Step 6. Move the remaining constant from the right to the left hand side.