Solving Basic Trigonometric Equations

Solve the following equations by following the steps below (All answers must be in radians):

1. Solve \( \sin(t) = \frac{\sqrt{2}}{2} \)
   
   - What are the two principal solutions, \( t_1 \) and \( t_2 \)?

   - What are the general solutions?

   - Write out two lists that each contain at least 4 of the general solutions generated from each of the principal solutions.
2. Solve \( \cos(t) = 0.73842 \) (be sure to use radians)
   
   - What are the two principal solutions, \( t_1 \) and \( t_2 \)?

   - What are the general solutions?

   - Write out two lists that each contain at least 4 of the general solutions generated from each of the principal solutions.
3. Solve $\sin(t) = -0.8181$ (be sure to use radians)
   
   • What are the two principal solutions, $t_1$ and $t_2$?

   • What are the general solutions?

   • Write out two lists that each contain at least 4 of the general solutions generated from each of the principal solutions.
4. Solve $\cos(t) = -\frac{1}{2}$ (be sure to use radians)

- What are the two principal solutions, $t_1$ and $t_2$?

- What are the general solutions?

- Write out two lists that each contain at least 4 of the general solutions generated from each of the principal solutions.
5. Solve \( \tan(t) = 3.3 \) (be sure to use radians)

- What is the principal solution, \( t_1 \)?

- What are the general solutions?

- Write out a list that contains at least 4 of the general solutions.
6. Solve \( \tan(t) = -1 \) (be sure to use radians)

- What is the principal solution, \( t_1 \)?

- What are the general solutions?

- Write out a list that contains at least 4 of the general solutions.