



# Forming and Solving Equations (H)

## Pre-Intervention Assessment

Name: \_\_\_\_\_

Class: \_\_\_\_\_

Date: \_\_\_\_\_

Question	Objective	RAG
1	Use iterations	
2	Solve quadratic equations	
3	Solve algebraic fractions	
4	Solve non-linear simultaneous equations	

1. An approximate solution to an equation is found using this iterative process:

$$x_{n+1} = \frac{(x_n)^3 - 3}{8} \quad \text{and} \quad x_1 = 1$$

(a) Work out the values of  $x_2$  and  $x_3$

$x_2 = \dots\dots\dots$

$x_3 = \dots\dots\dots$

(b) Work out the solution to 6 decimal places.

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2. Solve  $x^2 + x + 11 = 14$

Give your solutions correct to 3 significant figures.

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3. Solve  $\frac{5(2x+1)}{3} = 4x + 7$

$x = \dots\dots\dots$

4. Solve algebraically the simultaneous equations

$$x^2 + y^2 = 25$$

$$y - 2x = 5$$

$\dots\dots\dots$

[Glue here]