

Imbedded Linear Equations Activity

Solve. Make sure to find ALL solutions, and to simplify when possible.

1) $(x+5)^2 - 9 = 0$

2) $(x-12)^2 = 18$

3) $(x-3)^2 = 7$

4) $5(x-3)^2 = 50$

5) $3+8(4x-2)^2 = 11$

6) $3+4(x+2)^2 = 0$

7) $9(x-2)^2 + 10 = 10$

8) $\frac{2}{5}\left(x-\frac{3}{2}\right)^2 - \frac{1}{2} = 0$

9) Solve $(x-h)^2 + k = 0$ for x .

a) We now have a formula for solving equations that are in this form. In order for the previous equation to have real solutions, what must be true of k ?

b) Use this formula to solve the following mentally:

i) $(x-1)^2 - 4 = 0$

ii) $(x-1)^2 + 4 = 0$

iii) $(x+2)^2 - 3 = 0$

iv) $(x+13)^2 - 20 = 0$