

# Solving Quadratic Equations

Example 1:  $x - 3 = -x^2$

Example 2:  $5z^2 + 44z = 60$

Example 3:  $15 + w - 6w^2 = 0$

Example 4:  $2n^2 + 4 = 5n$

Example 5:  $3x^2 - 3x = 1$

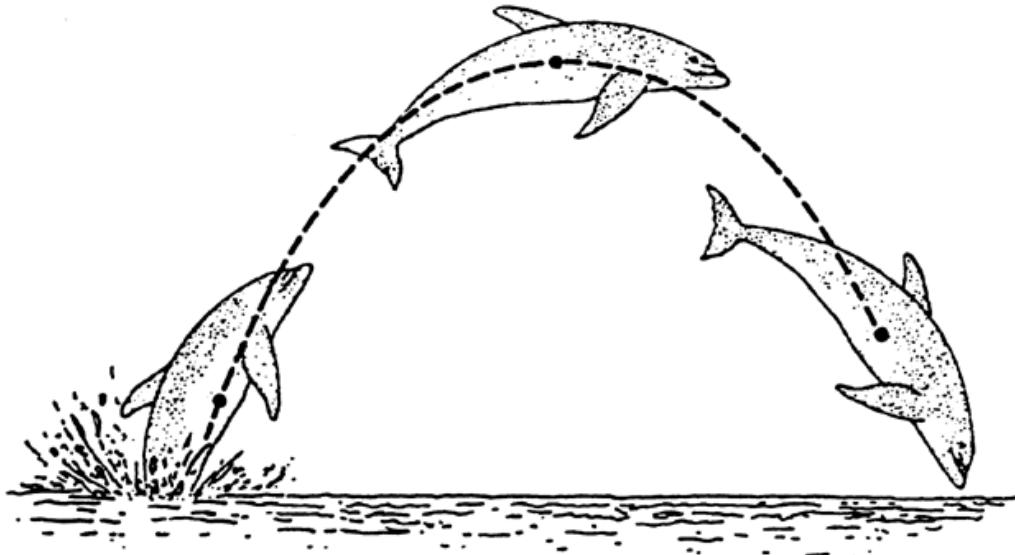
Example 6:  $x^2 + (x+1)^2 = (x+2)^2$

Example 7:  $(x-1)(x-2) + x(x-1) = x-1$

Example 8:  $3x(x-3) + 2x(x-2) = 1$

Example 9:  $(2x+1)^2 + (2x+3)^2 = 26$

Example 10:  $(x-1)(x+1)(x+3) = x^3$



Answers: 1.  $x = \frac{-1 \pm \sqrt{13}}{2}$

2.  $z = 6/5$  and  $z = -10$

3.  $w = 5/3$  and  $w = -3/2$

4.  $x = \frac{5 \pm \sqrt{-7}}{4}$  no real sol'n

5.  $x = \frac{3 \pm \sqrt{21}}{6}$

6.  $x = 3$  and  $x = -1$

7.  $x = 1$  and  $x = 3/2$

8.  $x = \frac{13 \pm 3\sqrt{21}}{10}$

9.  $x = -1 \pm \sqrt{3}$

10.  $x = \frac{1 \pm \sqrt{37}}{6}$