

## More Solving with Quadratics

1. Simplify and then solve each equation.

a)  $x(x+1) = 12$

b)  $3x(x+2) = 2x^2 - (4-x)$

c)  $(x+1)^2 - 16 = 0$

d)  $(x-2)(2x+3) = x+1$

2. A model rocket is shot straight up from the roof of a school. The height,  $h$ , in metres, after  $t$  seconds can be approximated by  $h = 15 + 22t - 5t^2$ .

a) What is the height of the school?

b) How long does it take for the rocket to pass a window that is 10 m above the ground?

c) When does the rocket hit the ground?

d) What is the maximum height of the rocket?

3. The sum of the squares of three consecutive **even** integers is 980. Determine the integers.