7. An archway was built for a wedding reception. The shape of the archway can be modelled by the quadratic relation $h = -0.15d^2 + 15$, where $h$ represents the height of the archway in feet and $d$ represents the horizontal distance in feet from the centre of the archway.

a) What is the maximum height of the archway?

b) What is the width of the archway at the base?

c) If the groom is 6 ft tall, how far from the centre can he walk safely under the archway?