

# Math 1513 - College Algebra

## Quiz #5 - 2011.09.01

### Solutions

---

1. Why are complex numbers needed when studying quadratic equations?

Some quadratic equations cannot be factored over the real numbers. In other words, not all quadratic equations have real roots, some have complex roots.

2. Solve the equation  $SA = 2\pi r^2 + 2\pi rh$  for the variable  $h$ .

First we subtract  $2\pi r^2$  from both sides, which gives  $SA - 2\pi r^2 = 2\pi rh$ . Next, to isolate  $h$ , we divide both sides by  $2\pi r$ , this yields  $h = \frac{SA - 2\pi r^2}{2\pi r}$ .