

Week 3 Wednesday

What Shape Is It?

Make sure you know your neighbor's names. Then discuss briefly:

Without using a graphing calculator, how would you describe what $V(x^2 + y^2 - z^2) \subseteq \mathbb{A}^3(\mathbb{R})$ looks like?

Affine Varieties

1. The subset $X = \{(x, y) : x \neq 0, y = x^2\}$ of $\mathbb{A}^2(k)$ is algebraic for...

- (A) No fields k .
- (B) Some fields k .
- (C) All fields k .