

### Day 30: Factoring Polynomials

1. Whiteboard pages 1 through 3.

- **Page 2:** On top of  $(x + 2)(x + 3)$ , write  $x^2 + 5x + 6$  and show how that equals  $x^2 + 1$  in  $\mathbb{Z}_5[x]$ .

2. **Work on Day 30 Class Work. Leave 10 – 15 minutes for discussions.**

3. Whiteboard pages 4 and 5.

- **Page 5:** In (a), above  $\deg f(x) = \deg(x - \alpha) + \deg q(x)$ , label with  $\geq 2$ ,  $= 1$ ,  $< \deg f(x)$ .

4. **Proof of the Day:** Whiteboard page 6.

- Write  $-2^{-1} \cdot 7$  under  $-7/2$ .