

8-7 Factoring Special Cases

Factor completely (1-4):

1. $x^2 - 12x + 36$

$$(x-6)^2$$

2. $4x^2 - 9$

$$(2x+3)(2x-3)$$

→

3. $3x^2 - 30x + 75$

$$3(x^2 - 10x + 25)$$

$$= 3(x-5)^2$$

4. $2x^3 - 128x$

$$= 2x(x^2 - 64)$$

$$= 2x(x+8)(x-8)$$

5. The area of a square is $9x^2 - 24x + 16$. How long is each side?

$$9x^2 - 24x + 16 = (?)^2$$

$$(3x-4)(3x-4)$$

Each side is $3x-4$ long.