

Advanced Factoring Errors

#14 $(2x-7y)^2 - (3x+2y)^2$

$$= [(2x-7y) - (3x+2y)][(2x-7y) + (3x+2y)]$$

$$= [2x-7y-3x-2y][2x-7y+3x+2y]$$

$$= [-x-9y][5x-5y] = (-1)(x+9y)(5)(x-y)$$

$$= -5(x+9y)(x-y) \leftarrow \text{this is the correct answer!}$$

#24 $2(x^2-10xy)^2 - 1152y^4$ exponent was wrongly written as 2

$$= 2[(x^2-10xy)^2 - 576y^4]$$

$$= 2[(x^2-10xy)^2 - (24y^2)^2]$$

$$= 2[(x^2-10xy-24y^2)(x^2-10xy+24y^2)]$$

$$= 2(x-12y)(x+2y)(x-6y)(x-4y)$$
