

Name: KEY  
Date: \_\_\_\_\_

F.4 Worksheet

**Factor**

1)  $x^2 + 6x + 9$

$$(x+3)(x+3)$$

$$(x+3)^2$$

2)  $y^2 - 9$

$$(y+3)(y-3)$$

3)  $p^2 - 10p + 25$

$$(p-5)(p-5)$$

$$(p-5)^2$$

4)  $m^2 - 49$

$$(m+7)(m-7)$$

5)  $64 - w^2$

$$(8+w)(8-w)$$

6)  $n^2 - 18n + 81$

$$(n-9)(n-9)$$

$$(n-9)^2$$

7)  $4p^2 - 25q^2$

$$(2p+5q)(2p-5q)$$

8)  $100a^2 - 49b^2$

$$(10a+7b)(10a-7b)$$

9)  $2x^2 + 8$

$$2(x^2 + 4)$$

10)  $36 + y^2 + 12y$

$$y^2 + 12y + 36$$

$$(y+6)(y+6)$$

$$(y+6)^2$$

11)  $-2m^2 + 32$

$$-2(m^2 - 16)$$

$$-2(m+4)(m-4)$$

12)  $20p^2 - 45r^2$

$$5(4p^2 - 9r^2)$$

$$5(2p+3r)(2p-3r)$$

13)  $8 - 72p^2$

$$8(1 - 9p^2)$$

$$8(1+3p)(1-3p)$$

14)  $16y - 2y^2 - 32$

$$-2y^2 + 16y - 32$$

$$-2(y^2 - 8y + 16)$$

$$-2(y-4)(y-4)$$

$$-2(y-4)^2$$

15)  $-300x^2 + 147y^2$

$$-3(100x^2 - 49y^2)$$

$$-3(10x+7y)(10x-7y)$$