

Warm-up 3/27/17

Determine the product for each.

1. $(x + 5)(x + 7)$

$x^2 + 7x + 5x + 35$

$x^2 + 12x + 35$

2. $(x - 5)(x - 7)$

$x^2 - 7x - 5x + 35$

$x^2 - 12x + 35$

3. $(x - 5)(x + 7)$

$x^2 + 7x - 5x - 35$

$x^2 + 2x - 35$

4. $(x + 5)(x - 7)$

$x^2 - 7x + 5x - 35$

$x^2 - 2x - 35$

Pg. 972

1a-c

$4x + 12$

$4(x) + 4(3)$

$4(x + 3)$

multiplying
(distributive
property)

$3(x + 5)$

$3(x) + 3(5)$

$3x + 15$

factoring

$x^3 - 5x$

$x(x^2 - 5)$

$3x^2 - 9x - 3$

$3(x^2 - 3x - 1)$

Pg. 974

Pg. 976

$$(x + 2)(x + 8)$$

| | | |
|---|-------|------|
| | x | 2 |
| x | x^2 | $2x$ |
| 8 | $8x$ | 16 |

$$x^2 + 10x + 16$$

$$x^2 + 10x + 16$$

| | | |
|---|-------|------|
| | x | 2 |
| x | x^2 | $2x$ |
| 8 | $8x$ | 16 |

$$(x + 2)(x + 8)$$

Pg. 976

5a

| | | | |
|-----|-------|--|------|
| | x | | 4 |
| x | x^2 | | |
| 5 | | | 20 |

$$(x+5)(x+4)$$

Pg. 977

$$(x+2)(x-12)$$

$$x^2 - 12x + 2x - 24$$

$$x^2 - 10x - 24$$

$$x^2 - 10x - 24$$

$$(x+2)(x-12)$$

| | |
|-----------------------------|-------|
| $P =$ | $S =$ |
| -24 | -10 |
| $1, -24$ | -23 |
| $2, -12$ | -10 |
| $3, -8$ | |
| $4, -6$ | |

Pg. 978

6b

7

$$(x+4)(x-7)$$

| | |
|----------|-------|
| $P =$ | $S =$ |
| -28 | -3 |
| $1, -28$ | -27 |
| $2, -14$ | -12 |
| $4, -7$ | -3 |

$$2x^2 + 3x - 5$$

$$(2x + 5)(x - 1)$$

$$-2x + 5x$$

Pg. 980

10b

$$x^2 + 10x + 24$$

$$(x+4)(x+6)$$

$$x^2 - 10x + 24$$

$$(x-4)(x-6)$$

| | |
|----------|-------|
| $P =$ | $S =$ |
| 24 | -10 |
| $-1, 24$ | |
| $-2, 12$ | |
| $-3, 8$ | |
| $-4, 6$ | -10 |

$$x^2 + 2x - 24$$

$$(x+4)(x-6)$$

| | |
|----------|-------|
| $P =$ | $S =$ |
| -24 | -2 |
| $1, -24$ | |
| $-1, 24$ | 23 |
| $-2, 12$ | 10 |
| $-3, 8$ | 5 |
| $+4, 6$ | -2 |

Pg. 981

$$(2x + 3)(x + 4)$$

$$2x^2 + 8x + 3x + 12$$

$$2x^2 + 11x + 12$$

$$2x^2 + 11x + 12$$

$$(2x + 3)(x + 4)$$