Factoring Quiz Review Thurs 5/10

Multiply the expression.

1. $(4x-2)(x+3)$

2. $4x^3y^2z(3xz - 2y^4z - 7xy)$

Factor the GCF of the polynomial.

3. $2x^5 + 18x^3 + 36x^2$

Factored Form: _____

4. $200xy^4z + 75x^3y^2z^2 - 125xy^7z$

Factored Form: _____

Factor the polynomial using grouping or Lizzy method

5. $x^2 + 15x + 26$

Factored Form: _____

Check!

6. $-3r^2 + 10r + 8$

Factored Form: _____

Check!

7. $6x^2 + 3x - 18$

Factored Form: _____

Check!

8. $3s^2 - 7s - 6$

Factored Form: _____

Check!

9. $-3x^2 - 16x - 5$

Factored Form: _____

Check!

10. $m^2 - 121$

Factored Form: _____

Check!

Factoring Quiz Review Thurs 5/10

Key

Multiply the expression.

1. $(4x-2)(x+3)$

$4x^2+12x-2x-6$

$4x^2+10x-6$

2. $4x^3y^2z(3xz-2y^4z-7xy)$

$12x^4y^2z^2-8x^3y^6z^2-28x^4y^3z$

Factor the GCF of the polynomial.

3. $2x^5+18x^3+36x^2$ (GCF $2x^2$)

$2x^2(x^3+9x+18)$

Factored Form: $2x^2(x^3+9x+18)$

4. $200xy^4z+75x^3y^2z^2-125xy^7z$ (GCF $25xy^2z$)

$25xy^2z(8y^2+3x^2z-5y^5)$

Factored Form: $25xy^2z(8y^2+3x^2z-5y^5)$

Factor the polynomial using grouping or Lizzy method

5. $x^2+15x+26$

$a\cdot c = 1\cdot 26 = 26$

1, 26
2, 13

$x^2+2x+13x+26$

$x(x+2)+13(x+2)$

$(x+2)(x+13)$

$(x+2)(x+13)$

Factored Form: $(x+2)(x+13)$

6. $-3r^2+10r+8$

$a\cdot c = -24$

1, 24
2, 12
3, 8
4, 6

$-1(3r^2-10r-8)$

$3r^2+2r-12r-8$

$r(3r+2)-4(3r+2)$

$-1(3r+2)(r-4)$

$-1(r-4)(3r+2)$

Factored Form: $-1(3r+2)(r-4)$

Check!

Check!

7. $6x^2+3x-18$ $3(2x^2+1x-6)$

$a\cdot c = 2\cdot(-6) = -12$

1, 12
2, 6
3, 4

$2x^2+4x-3x-6$

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

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

$(x+2)(x-\frac{3}{2})$

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

Factored Form: $3(x+2)(2x-3)$

Check!

8. $3s^2+2s-9s-6$

$s(3s+2)-3(3s+2)$

$(3s+2)(s-3)$

$(3s+2)(s-3)$

1, 18
2, 9
3, 6

Factored Form: $(3s+2)(s-3)$

Check!

9. $-3x^2-16x-5$ $a\cdot c = 15$

1, 15
3, 5

$-1(3x^2+16x+5)$

$3x^2+1x+15x+5$

$x(3x+1)+5(3x+1)$

$(3x+1)(x+5)$

$(3x+1)(x+5)$

Factored Form: $-1(3x+1)(x+5)$

Check!

10. m^2-121 $m^2+0m-121$ $a\cdot c = -121$

1, 121
11, 11

$m^2-11m+11m-121$

$m(m-11)+11(m-11)$

$(m-11)(m+11)$

$(m-11)(m+11)$

Factored Form: $(m-11)(m+11)$

Check!