Circles – Factoring

Notes Section 11.1, 11.2

Name_____

Pre-steps:
1) Write terms in descending order with respect to one of the variables.
2) Make sure lead coefficient is positive.

Four Terms

1) Factor out GCF

$aw \pm ax \pm ay \pm az = a[w \pm x \pm y \pm z]$

2) Factor by grouping

Binomial

1) Factor out GCF

$ax \pm ay = a[x \pm y]$

2) Difference of Two Squares

$x^2 - a^2 = (x + a)(x - a)$

3) Difference/Sum of Two Cubes

$x^3 \pm a^3 = (x \pm a)(x^2 \mp ax + a^2)$

Trinomials

1) Factor out GCF

$ax \pm ay \pm az = a[x \pm y \pm z]$

2) Perfect Square Trinomial

$x^2 \pm 2ax + a^2 = (x \pm a)^2$

3) The Australian Method

Circles – Factoring

Notes Section 11.1, 11.2 Name_____

Factor each polynomial.

#1) $-2 + x^3 - x^2 + 2x$

#2) $-192x^2y - 72x^3 + 24rxy + 9rx^2$

Factor each binomial.

#3) $200 - 98x^2$

#4) $49x^2 - 100$

#5) $49x(x + 4) - 100(x + 4)$

#6) $x^2(x - 10) + 17(x - 10)$

Factor each using perfect square trinomial.

#7) $10x^2 + 100x + 250$

#8) $49x^2 - 56x + 16$

Factor by the Australian method

#9) $19x + 5x^2 + 12$

#10) $-16x^2 - 60x + 100$

Factor each using the difference or sum of two cubes.

#11) $1029x^3y - 24y^4$

#12) $-1 - x^3$