AA PREP—FACTORING VARIATIONS (BASICS)—WORKSHEET #1 KEY

Factor completely.

1) $160x^5 - 32x^3$ GCF

$32x^3(5x^2 - 1)$

2) $40xy^4 - 60x^3y^5$ GCF

$20xy^4(2 - 3x^2y)$

3) $x^2 - 25$ DIFF OF TWO SQUARES

$(x)^2 \quad (5)^2$

$(x-5)(x+5)$

4) $x^2 - 100$ DIFF OF TWO SQUARES

$(x)^2 \quad (10)^2$

$(x-10)(x+10)$

5) $36x^2 - 121$ DIFF OF TWO SQUARES

$(6x)^2 \quad (11)^2$

$(6x-11)(6x+11)$

6) $x^4 - 16$ DIFF OF TWO SQUARES

$(x^2)^2 \quad (4)^2$

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

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

7) $x^2 + 3x - 54$ BASIC QUADRATIC TRINOMIAL ax^2+bx+c $a=1$

$a \cdot c$: -54; factors 9 and -6; $9 + (-6) = 3 = b$

$(x+9)(x-6)$

8) $-x^2 + x + 20$ GCF IST! BASIC QUADRATIC TRINOMIAL ax^2+bx+c $a=1$

$-1(x^2 - x - 20)$

$a \cdot c$: -20; factors -5 and 4; $-5 + 4 = -1 = b$

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

9) $x^2 + 2x + 1$ PERFECT SQUARE TRINOMIAL

$(x)^2 \quad (1)^2$

$(x+1)^2$

10) $x^2 - 12x + 36$ PERFECT SQUARE TRINOMIAL

$(x)^2 \quad (6)^2$

$(x-6)^2$