

LT #3: Factoring

Factor the following completely. (2 pts each)

1. $4x^2 - 25$

2. $y^3 - 8$

~~24~~
8 3
11
3. $2x^2 + 11x + 12$
 $x^2 + 11x + 24$
 $(x + \frac{8}{2})(x + \frac{3}{2})$

4. $x^3 - 2x^2 + 5x - 10$
 $x^2(x-2) + 5(x-2)$

~~20~~
5 4
9
5. $2b^4 + 9b^3 + 10b^2$
 $b^2(2b^2 + 9b + 10)$

~~24~~
8 3
11
6. $6x^2 + 11xy + 4y^2$
 $x^2 + 11xy + 24y^2$
 $(x + \frac{8y}{6})(x + \frac{3y}{8})$

$b^2(b^2 + 9b + 20)$
 $b^2(b + 5)(b + 4)$
7. $2x^3 - 32x$
 $2x(x^2 - 16)$
 $(x + \frac{4}{3}y)(x + \frac{1}{2}y)$

1. $(2x-5)(2x+5)$
2. $(y-2)(y^2+2y+4)$
3. $(x+4)(2x+3)$
4. $(x^2+5)(x-2)$
5. $b^2(2b+5)(b+2)$
6. $(3x+4y)(2x+y)$
7. $2x(x-4)(x+4)$

/ 14

LT #4: Zero Product Property

8. Solve by factoring and the zero product property. (3 points)

~~10~~
10 -1
-11

$2x^2 - 11x + 5 = 0$
 $x^2 - 11x + 10 = 0$
 $(x - \frac{10}{2})(x - \frac{1}{2})$ $(x-5)(2x-1)$

8. $x=5, x=1/2$

9. Solve by factoring and the zero product property. (3 points)

$4x^2 - 9 = 0$
 $(2x-3)(2x+3) = 0$

9. $x=3/2, -3/2$

10. Write a quadratic equation in standard form given the following roots: 2, -5 (2 points)

$y = (x-2)(x+5)$
 $x^2 + 5x - 2x - 10$

10. $y = x^2 + 3x - 10$

/ 8