Algebra II - Chapter 4 Factoring Day 5 Name: Key

Factor completely or solve by factoring.

1. $s^2 + 9x + 20$

$(s+4)(s+5)$

2. $x^2 - 2x - 35$

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

3. $x^2 + 4x - 12$

$(x+6)(x-2)$

4. $x^2 - 5x + 6$

$(x-6)(x+1)$

5. $81x^4 - 900x^2 = 0$

$9x^2(9x^2-100)=0$

$9x^2(3x-10)(3x+10)=0$

$x=0$ $x=\frac{10}{3}$ $x=\frac{-10}{3}$

6. $x^2 - 5x - 24$

$(x-8)(x+3)$

7. $10x^3 - 1960x = 0$

$10x(x^2-196)=0$

$10x(x-14)(x+14)=0$

$x=0$ $x=14$ $x=-14$

8. $x^2 - 11x + 19 = -5$

$x^2-11x+24=0$

$(x-3)(x-8)=0$

$x=3$ $x=8$

9. $x^2 + 7x + 15 = 5$

$x^2+7x+10=0$

$(x+2)(x+5)=0$

$x=-2$ $x=-5$

10. $5x^9 - 40x^2$

$5x^2(x^7-8)$

11. $4n^2 - 16n + 8n$

$4n^2-8n$

$4n(n-2)$

12. $6x^2 - 18x - 18 = 6$

$6x^2-18x-24=0$

$6(x^2-3x-4)=0$

$6(x-4)(x+1)=0$

$x=4$ $x=-1$

13. $7x^2 - 28x - 14$

$7(x^2-4x-2)$

14. $7x^2 - 14x = -7$

$7x^2-14x+7=0$

$7(x^2-2x+1)=0$

$7(x-1)^2=0$

$x=1$

15. $x^2 + 5x - 35 = 3x$

$x^2+2x-35=0$

$(x-5)(x+7)=0$

$x=5$ $x=-7$

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

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

17. $2x^2 - 5 = -7x^2 + 11$

$9x^2-16=0$

$(3x-4)(3x+4)=0$

$x=\frac{4}{3}$ $x=\frac{-4}{3}$

18. $4x^2 = 10x - 25$

$4x^2-10x+25=0$

not factorable