**Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_ Period: \_\_\_\_\_\_\_\_**

**Factoring Using Distributive Property – Worksheet 529**

**Solve each equation. Check you solution.**

**1.** *x*(*x* + 3) = 0 **2.** 3*m*(*m* – 4) = 0 **3.**  (*r* – 3)(*r* + 2) = 0

**4.** 3*x*(2*x* – 1) = 0 **5.** (4*m* + 8)(*m* – 3) = 0 **6.** 5$s^{2}$ = 25*s*

**7.**  (4*c* + 2)(2*c* – 7) = 0 **8.**  5*p* – 15$p^{2}$ = 0 **9.** 4$y^{2}$ = 28*y*

**10.** 12$x^{2}$ = **–**2*x* **11.**  (4*a* + 3)(8*a* + 7) = 0 **12.** 8*y* = 12$y^{2}$

**13.** $ x^{2}$ = **–**2*x* **14.** (6*y* – 4)(*y* + 3) = 0 **15.** 4$m^{2}$ = 4*m*

**16.** 12*x* = 3$x^{2}$ **17.** 12$a^{2}$ = **–**3*a* **18.** (12*a* + 4)(3*a* – 1) = 0

**Factor each polynomial.**

**19.** 24*x* + 48*y* **20.**  30*m*$n^{2}$ + $m^{2}n$ – 6*n* **21.**  $q^{4}$ – 18$q^{3}$ + 22*q*

**22.**  9$x^{2}$ – 3*x* **23.**  4*m* + 6*n* – 8*mn* **24.**  45$s^{3}$ – 15$s^{2}$

**25.**  14$c^{3}$ – 42$c^{5}$ – 49$c^{4}$ **26.**  55$p^{2}$ – 11$p^{4}$ + 44$p^{5}$ **27.**  14$y^{3}$ – 28$y^{2}$ + *y*

**28.**  4*x* + 12$x^{2}$ + 16$x^{3}$ **29.**  4$a^{2}b$ + 28*a*$b^{2}$ + 7*ab* **30.**  6*y* + 12*x* – 8*z*

**31.**  $x^{2}$ + 2*x* + *x* + 2 **32.**  6$y^{2}$ – 4*y* + 3*y* – 2 **33.**  4$m^{2}$ + 4*mn* + 3*mn* + 3$n^{2}$

**34.**  12*ax* + 3*xz* + 4*ay* + *yz* **35.**  12$a^{2}$ + *3*a – 8*a* – 2 **36.**  *xa* + *ya* + *x* + *y*