**Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Date:\_\_\_\_\_\_\_\_\_\_\_\_\_Per:\_\_\_\_\_\_\_\_\_\_\_**

**Factor Using the GCF**

**Worksheet 531**

**Factor each polynomial.**

**1.** 7*x* + 49 **2.** 8*m* – 6 **3.** 5*a*² – 15

**4.** 10*q* – 25*q*² **5.** 8*ax* – 56*a* **6.** 81*r* + 48*rs*

**7.** *t*²*h* + 3*t* **8.** 10*m*3*n*3 – 2*mn*² + 14*mn* **9.** *x* + *x*²*y* + *x*3*y*²

**10.** 3*p*²*q*² + 6*pq* + *p* **11.** 4*a*²*b*² + 16*ab* + 12*a* **12.** *a*²*b*² +*a*

**Solve each equation.**

**13.** *x*(*x* – 8) = 0 **14.** *b*(*b* + 12) = 0

**15.** (*m* – 3)(*m* + 5) = 0 **16.** (*a* – 9)(2*a* + 1) = 0

**17.** *x*² – 5*x* = 0 **18.** *y*² + 3*y* = 0

**19.** 3*a*² = 6*a* **20.** 2*x*² = 3*x*

**Factor Using the GCF**

**Worksheet 532**

**Factor each polynomial.**

**1.** 64 – 40*ab* **2.** 4*d*² + 16 **3.** 6*r*²*s* – 3*rs*²

**4.** 15*cd* + 30*c*²*d*² **5.** 32*a*² + 24*b*² **6.** 36*xy*² – 48*x*²*y*

**7.** 30*x*3*y* + 35*x*²*y*² **8.** 9*c*3*d*² – 6*cd*3 **9.** 75*b*²*c*3 + 60*bc*3

**10.** 8*p*²*q*² – 24*pq*3*+* 16*pq* **11.** 5*x*3*y*² + 10*x*²*y* + 25*x* **12.** 9*ax*3 + 18*bx*² + 24*cx*

**Solve each equation.**

**13.** *x*(*x* – 32) = 0 **14.** 4*b*(*b* + 4) = 0 **15.** (*y* – 3)(*y* + 2) = 0

**16.** (*a* + 6)(3*a* – 7) = 0 **17.** (2*y* + 5)(*y* – 4) = 0 **18.** (4*y* + 8)(3*y* – 4) = 0

**19.** 2*z*² + 20*z* = 0 **20.** 8*p*² – 4*p* = 0 **21.** 9*x*² = 27*x*

**22.** 18*x*² = 15*x* **23.** 14*x*² = –21*x* **24.** 8*x*² = –26*x*