Name:
Show work needed to justify your answer. Date: $\qquad$

## Simplify each expression.

1. $b\left(b^{2}-12 b+1\right)$
2. $-3 m^{3}\left(2 m^{3}-12 m^{2}+2 m+25\right)$
3. $2 j^{2}\left(5 j^{3}-15 j^{2}+2 j+2\right)$
4. $2 p r^{2}\left(2 p r+5 p^{2} r-15 p\right)$

Simplify each expression.
7. $-3\left(5 x^{2}+2 x+9\right)+x(2 x-3)$
8. $a\left(-8 a^{2}+2 a+4\right)+3\left(6 a^{2}-4\right)$
9. $-4 d\left(5 d^{2}-12\right)+7(d+5)$
10. $-9 g\left(-2 g+g^{2}\right)+3\left(g^{3}+4\right)$
11. $2 j\left(7 j^{2} k^{2}+j k^{2}+5 k\right)-9 k\left(-2 j^{2} k^{2}+2 k^{2}+3 j\right)$

