

Determine each product using special patterns (not by double distribution):

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

2. $(3a + 2)(3a - 2)$

3. $(x + 4)^2$

4. $(q - 7)^2$

5. $(5a^2 - 8b)(5a^2 + 8b)$

6. $(9x + 2)^2$

7. $(10pq^3 + 1)(10pq^3 - 1)$

8. $(3a - 4b)^2$

9. $-2x(x - 9)^2$

10. $3z(2z - 3)(2z + 3)$

KEY

1. $x^2 - 36$
2. $9a^2 - 4$
3. $x^2 + 8x + 16$
4. $q^2 - 14q + 49$
5. $25a^4 - 64b^2$
6. $81x^2 + 36x + 4$
7. $100p^2q^6 - 1$
8. $9a^2 - 24ab + 16b^2$
9. $-2x^3 + 36x^2 - 162x$
10. $12z^3 - 27z$