1. Completely factor using the forms for perfect square trinomials. $49a^2 + 56a + 16$

A. Not factorable. This trinomial is prime.

B. $(7a + 1)(7a + 16)$

C. $(4a + 7)(4a + 3)$

D. $(49a + 4)(a + 4)$

E. $(6a + 3)(5a + 2)$

F. $(7a + 3)(7a + 2)$

G. $(7a + 4)(7a + 4)$

H. $(6a + 4)(5a + 4)$

2. Factor the polynomial. $9 - 16u^2$

A. $(3 + 4u)(3 + 4u)$

B. $(3u - 4)(3q - 4)$

C. $(3u + 4)(3q - 4)$

D. $(3q + 4)(3u + 4)$

E. $(4q - 8)(5q - 6)$

F. $(3q - 4)(3u + 4)$

G. Not factorable.

H. $(3 + 4u)(3 - 4u)$

3. Factor the polynomial. $49x^2 + 16c^2$

A. Not factorable.

B. $(7x - 4c)(7x - 4c)$

C. $(4x - 1)(6x - 2)$

D. $(7x + 4c)(7x - 4c)$

E. $(7x + 4c)(7x + 4c)$

F. $(7x + 4)(7c + 4)$

G. $(49x + 4c)(7x - 16c)$

H. $(7x - 4)(7c + 4)$

4. Completely factor the binomial using the form for the sum or difference of two cubes. $8\gamma^3 - 1$

A. $(2\gamma - 1)(4\gamma^2 + 2\gamma + 1)$

B. $(2\gamma - 1)(4\gamma^2 + 1)$

C. $(2\gamma + 1)(4\gamma^2 - 1)$

D. $(2\gamma - 1)(4\gamma^2 - 2\gamma + 1)$

E. $(2\gamma + 1)(4\gamma^2 - 2\gamma + 1)$

F. $(2\gamma + 1)(4\gamma^2 + 1)$

G. Not factorable.

H. $(2\gamma - 1)(4\gamma^2 - 1)$

5. Factor the polynomial. $36 + \phi^2$

A. $(6t - 1)(6\phi + 1)$

B. $(6t + 1)(6\phi + 1)$

C. $(6t + \phi)(6t - \phi)$

D. $(t - 2)(3t - 5)$

E. Not factorable.

F. $(36t + \phi)(6t - \phi)$

G. $(6t - \phi)(6t - \phi)$

H. $(6t + \phi)(6t + \phi)$

6. Factor the polynomial. $25\xi^2 - 49\beta^2$

A. $(5\xi + 7\beta)(5\xi - 7\beta)$

B. $(5\xi - 7\beta)(5\xi - 7\beta)$

C. $(5\xi + 7)(5\beta + 7)$

D. Not factorable.

E. $(25\xi + 7\beta)(5\xi - 49\beta)$

F. $(5\xi + 7\beta)(5\xi + 7\beta)$

G. $(5\xi - 7)(5\beta + 7)$

H. $(7\xi - 2)(3\xi - 6)$

7. Factor the polynomial. $25b^2 - 36$

A. $(25b + 6)(5b + 36)$

B. $(25b - 6)(5b - 36)$

C. $(5b - 6)(5b - 6)$

D. $(5b + 6)(5b - 6)$

E. $(5b + 6)(5b + 6)$

F. $(6b + 7)(b + 3)$

G. $(25b + 6)(5b - 36)$

H. Not factorable.

8. Factor the polynomial. $49\theta^2 - 9$

A. $(49\theta + 3)(7\theta + 9)$

B. $(7\theta + 3)(7\theta - 3)$

C. Not factorable.

D. $(7\theta + 3)(7\theta + 3)$

E. $(7\theta - 3)(7\theta - 3)$

F. $(3\theta + 1)(8\theta + 4)$

G. $(49\theta + 3)(7\theta - 9)$

H. $(49\theta - 3)(7\theta - 9)$