

1. Factor the following quadratic polynomial. $18q^2 - 9q\phi - 20\phi^2$

A. $(3q - \phi)(6q + 20\phi)$

B. $(3q + \phi)(6q - 20\phi)$

C. $(3q - 4\phi)(6q - 5\phi)$

D. $(3q + 4\phi)(6q - 5\phi)$

E. $(3q - 4\phi)(6q + 5\phi)$

F. Not factorable. This trinomial is prime.

G. $(18q - 4\phi)(q + 5\phi)$

H. $(18q + 4\phi)(q - 5\phi)$

2. Factor the following quadratic polynomial. $20y^2 + 67yw - 18w^2$

A. $(20y - 3w)(y + 6w)$

B. $(4y + 3w)(5y - 6w)$

C. $(4y + w)(5y - 18w)$

D. $(4y - 3w)(5y - 6w)$

E. $(4y - w)(5y + 18w)$

F. $(4y - 3w)(5y + 6w)$

G. Not factorable. This trinomial is prime.

H. $(20y + 3w)(y - 6w)$

3. Factor the following quadratic polynomial. $24\alpha^2 - 86\alpha t - 15t^2$

A. $(6\alpha + 5t)(4\alpha - 3t)$

B. $(24\alpha + 5t)(\alpha - 3t)$

C. $(6\alpha - 5t)(4\alpha + 3t)$

D. Not factorable. This trinomial is prime.

E. $(6\alpha - t)(4\alpha + 15t)$

F. $(24\alpha - 5t)(\alpha + 3t)$

G. $(6\alpha - 5t)(4\alpha - 3t)$

H. $(6\alpha + t)(4\alpha - 15t)$

4. Factor the following quadratic polynomial. $45v^2 + 92va + 32a^2$

A. Not factorable. This trinomial is prime.

B. $(9v + a)(5v + 32a)$

C. $(4v + 5a)(8v + 7a)$

D. $(2v + 4a)(6v + 8a)$

E. $(9v + 7a)(5v + 3a)$

F. $(45v + 4a)(v + 8a)$

G. $(2v + 7a)(6v + 3a)$

H. $(9v + 4a)(5v + 8a)$

5. Factor the following quadratic polynomial. $12z^2 + 37z - 10$

A. $(4z + 1)(3z - 10)$

B. $(12z + 2)(z - 5)$

C. $(12z - 2)(z + 5)$

D. $(4z - 2)(3z + 5)$

E. $(4z + 2)(3z - 5)$

F. Not factorable. This trinomial is prime.

G. $(4z - 1)(3z + 10)$

H. $(4z - 2)(3z - 5)$

6. Factor the following quadratic polynomial. $40\beta^2 + 8\beta - 1$

A. Not factorable. This trinomial is prime.

B. $(40\beta + 1)(\beta + 1)$

C. $(5\beta + 1)(8\beta + 1)$

D. $(2\beta - 1)(20\beta - 1)$

E. $(4\beta - 1)(10\beta - 1)$

F. $(40\beta - 1)(\beta + 1)$

G. $(5\beta - 1)(8\beta + 1)$

H. $(2\beta + 1)(20\beta - 1)$

7. Factor the following quadratic polynomial. $6u^2 - 31u - 30$

A. $(6u - 5)(u + 6)$

B. $(2u - 5)(3u + 6)$

C. $(2u + 1)(3u - 30)$

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

E. $(2u + 5)(3u - 6)$

F. $(2u - 1)(3u + 30)$

G. Not factorable. This trinomial is prime.

H. $(2u - 5)(3u - 6)$

8. Factor the following quadratic polynomial. $8b^2 + 14b\alpha - 15\alpha^2$

A. $(2b + \alpha)(4b - 15\alpha)$

B. $(2b + 5\alpha)(4b - 3\alpha)$

C. $(2b - \alpha)(4b + 15\alpha)$

D. $(2b - 5\alpha)(4b - 3\alpha)$

E. $(8b + 5\alpha)(b - 3\alpha)$

F. $(2b - 5\alpha)(4b + 3\alpha)$

G. $(8b - 5\alpha)(b + 3\alpha)$

H. Not factorable. This trinomial is prime.