

1. Completely factor each polynomial using the strategy outlined in Section 6.5 in your textbook.

$$2z^{10}c - 72z^8c$$

A. $2z^8c(z + 6)(1z - 36)$

B. $2z^8c(z + 6)(1z - 6)$

C. $8z^7(z + 6)(1z + 36)$

D. $7z^7(z - 6)(1z - 36)$

E. $4z^8(6z + 2)(8z + 7)$

F. $7z^7c(z - 6)(1z - 6)$

G. $7z^7(z + 6)(1z + 6)$

H. $8z^7c(z + 6)(1z + 6)$

2. Completely factor each polynomial using the strategy outlined in Section 6.5 in your textbook.

$$15\phi^4 + 8\phi^3u - 12\phi^2u^2$$

A. $\phi^2(3\phi - 2u)(5\phi + 6u)$

B. $(\phi^2 - 1)(15\phi + 2u)(\phi - 6u)$

C. $(\phi^2 - 1)(3\phi + u)(5\phi - 12u)$

D. $3\phi^2(15\phi - 2u)(\phi + 6u)$

E. $\phi^2(3\phi - 2u)(5\phi - 6u)$

F. $3\phi^2(3\phi + 2u)(5\phi - 6u)$

G. $(\phi^2 + 1)(15\phi + 2u)(\phi - 6u)$

H. $(\phi^2 + 1)(3\phi - u)(5\phi + 12u)$

3. Factor the polynomial by grouping.

$$sp - s\gamma - sw + xp - x\gamma - xw$$

A. $(s - x)(p + \gamma - w)$

B. $(s - x)(p - \gamma + w)$

C. $(s + x)(p - \gamma - w)$

D. $(s - x)(p + \gamma + w)$

E. $(s + x)(p - \gamma + w)$

F. $(s - x)(p - \gamma - w)$

G. $(s + x)(p + \gamma + w)$

H. $(s + x)(p + \gamma - w)$

4. Completely factor each polynomial using the strategy outlined in Section 6.5 in your textbook.

$$\gamma^4 - 256$$

A. $(\gamma^2 + 16)(\gamma^2 - 4^2)$

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

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

D. $(\gamma^2 + 16)(\gamma^2 + 4^2)$

E. $(\gamma^2 + 16)(\gamma + 4)(\gamma + 4)$

F. $(\gamma^2 + 16)(\gamma + 4)(\gamma - 4)$

G. $(\gamma - 4)^2(\gamma - 4)^2$

H. $(\gamma^2 + 16)(\gamma - 4)(\gamma - 4)$

5. Completely factor each polynomial using the strategy outlined in Section 6.5 in your textbook.

$$9v^3 + 24v^2p + 16vp^2$$

A. $3v^2(3v + 4p)(3v - 4p)$

B. $3v^2(3v - 4p)(3v + 4p)$

C. $3(3v + 4p)(3v + 4p)$

D. $v(3v + 4p)(3v + 4p)$

E. $v^2(3v + 4p)(3v - 4p)$

F. $v^2(3v - 4p)(3v + 4p)$

G. $3v(3v + 4p)(3v + 4p)$

H. $3v^2(3v + 4p)(3v + 4p)$

6. Factor the polynomial by grouping.

$$40t^2 + 5ta + 8t + a$$

A. $(5t + a)(8t + a)$

B. $(5t + a)(8t + a)$

C. $(5t + a)(8t + a)$

D. $(5t + a)(8t + a)$

E. $(8a + 1)(8t + a)$

F. $(5a + 1)(8t + a)$

G. $(8t + 1)(5t + a)$

H. $(5t + 1)(8t + a)$

7. Factor the polynomial by grouping.

$$2\phi - 4a + 5\phi p - 10ap$$

A. $(\phi p + 2)(5 - 2a)$

B. $(5\phi - 2)(p + 2a)$

C. $(5p - 2)(a + 2\phi)$

D. $(5p + 2)(\phi - 2a)$

E. $(5p - 2)(\phi - 2a)$

F. $(5p + 2)(a - 2\phi)$

G. $(2p - 5)(\phi - 2a)$

H. $(5p - 2)(\phi + 2a)$

8. Factor the polynomial by grouping.

$$4\beta^2 - 25\alpha^2 - 40\alpha - 16$$

A. $(2\beta - 1)(5\alpha + 4)$

B. $[2\beta + (5\alpha + 4)][2\beta - (5\alpha + 4)]$

C. $[2\beta - (5\alpha + 4)][2\beta - (5\alpha + 4)]$

D. $[2\beta + (5\alpha + 4)][2\beta + (5\alpha - 4)]$

E. $(2\beta + 1)(5\alpha + 4)$

F. $(2\beta + 1)(5\alpha - 4)$

G. $[2\beta + (5\alpha + 4)][2\beta - (5\alpha - 4)]$

H. $(2\beta - 1)(5\alpha - 4)$