

1. Write the expression in expanded form.  $(-4b + \gamma)^5$

A.  $(-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma)$

B.  $(-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma)$

C.  $-4b + \gamma^5$

D.  $-20b + \gamma^5$

E.  $(-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma) + (-4b + \gamma)$

F.  $(-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma) \cdot (-4b + \gamma)$

2. Simplify the expression.  $(\frac{4t^3}{x^4})^5$

A.  $4t^{15}x^{20}$

B.  $\frac{1024t^8}{x^9}$

C.  $1024t^8x^9$

D.  $4t^8x^9$

E.  $\frac{4t^{15}}{x^{20}}$

F.  $\frac{1024t^{15}}{x^{20}}$

G.  $\frac{4t^8}{x^9}$

H.  $20t^8x^9$

3. Simplify the expression.  $(3x^3 \cdot 2x^5)^2$

A.  $12x^{16}$

B.  $6x^{16}$

C.  $36x^{10}$

D.  $5x^{10}$

E.  $36x^{16}$

F.  $6x^{10}$

G.  $12x^8$

H.  $15x$

4. Simplify the expression.  $-\left(\frac{4y^3}{q^4}\right)^5$

A.  $-4y^{15}q^{20}$

B.  $-\frac{1024y^{15}}{q^{20}}$

C.  $\frac{1024y^{15}}{q^{20}}$

D.  $-\frac{4y^{15}}{q^{20}}$

E.  $4y^8q^9$

F.  $20y^8q^9$

G.  $-1024y^8q^9$

H.  $\frac{4y^8}{q^9}$

5. Simplify the expression.  $-(3x^2 \cdot \alpha^5)^4$

- A.  $12x^6\alpha^9$
- B.  $-3x^8\alpha^{20}$
- C.  $-81x^8\alpha^9$
- D.  $-81x^8\alpha^{20}$
- E.  $12x^8\alpha^9$
- F.  $-81x^6\alpha^9$
- G.  $-3x^6\alpha^9$
- H.  $12x^8\alpha^{20}$

6. Simplify the expression.  $(\frac{w^3}{a^4})^6$

- A.  $\frac{w^{18}}{a^{24}}$
- B.  $\frac{9w}{10a}$
- C.  $\frac{w^{18}}{a^{10}}$
- D.  $\frac{w^9}{a^{24}}$
- E. This expression is undefined.
- F.  $\frac{3w^6}{4a^6}$
- G.  $\frac{w^9}{a^{10}}$
- H.  $\frac{18w}{24a}$

7. Simplify the expression.  $(3\alpha^4 \cdot \gamma^2)^3(2\alpha^4 \cdot \gamma^2)^3$

A.  $9\alpha^{144}\gamma^{36}$

B.  $6\alpha^{24}\gamma^{12}$

C.  $216\alpha^{14}\gamma^{10}$

D.  $18\alpha^{24}\gamma^{12}$

E.  $1458\alpha^{144}\gamma^{36}$

F.  $6\alpha^{14}\gamma^{10}$

G.  $216\alpha^{24}\gamma^{12}$

H.  $81\alpha^{24}\gamma^{12}$

8. Simplify the expression.  $\left(\frac{3\xi^3}{2q^2}\right)^5$

A.  $\frac{3\xi^{15}}{2q^{10}}$

B.  $3\xi^8q^7$

C.  $\frac{3\xi^8}{2q^7}$

D.  $\frac{243\xi^8}{32q^7}$

E.  $\frac{243\xi^{15}}{32q^{10}}$

F.  $243\xi^8q^7$

G.  $3\xi^{15}q^{10}$

H.  $15\xi^8q^7$