

# [6-1B] Multiplying Monomials

$$\textcircled{1} y^4 \cdot y^2 \dots (y \cdot y \cdot y \cdot y) \cdot (y \cdot y) = y^6$$

$$\textcircled{2} x^{23} \cdot x^{21} = x^{44}$$

$$a^m \cdot a^n = a^{m+n}$$

same base

$$\textcircled{3} (-4x^2y^5)(7x^1y^4) = -28x^3y^9$$

$$\textcircled{4} \left(\frac{16^4}{8^1} x^2 y\right) \left(\frac{15^3}{4^1} x^3 y^2\right) = 12x^5y^3$$

$$\textcircled{5} 3x + 4x = 7x$$

$$\textcircled{6} 3x^2y - 1x^2y = 2x^2y$$

$$\textcircled{7} (1x^1y^3)(-3x^2y^3) + (-2x^3y^1)(y^5) = -3x^3y^6 + -2x^3y^6 = -5x^3y^6$$

$$\textcircled{8} a^m \cdot a^x = a^{m+x}$$

$$\textcircled{9} 3^p \cdot 3^k = 3^{k+p}$$

$$\textcircled{10} a^x \cdot a^x = a^{x+x} = a^{2x}$$

$$\textcircled{11} (n \cdot x^5)(6 \cdot x^4) = 6nx^9$$

# [6-1B] Multiplying Monomials

Simplify.

A

4.  $n^2 \cdot n^2 \cdot n$

10.  $(5x^2)(3x^3y^4)$

16.  $(3y^3z)(4y^4z^2)$

2.  $a^2 \cdot a^2$

8.  $(y^3z)(y^2z^3)$

14.  $(3r^2s^3)(-5r^3s)$

6.  $(5a^5)(6a^6)$

12.  $(5y^3)(-2y^4)$

18.  $(ab^2)(5a^2b^3)(3a^3)$

20.  $(-r^2s)(-3rs^3)(-s^2)$

22.  $(\frac{2}{7}a^2)(21a^3)$

24.  $\frac{4h^3k^2}{7} \cdot \frac{21hk^5}{2}$

26.  $(8c^2)(-d)(-\frac{1}{4}cd^2)$

28.  $(-a^3b)(-a^2b^2)(-ab^3)$

30.  $(5b^4)(-3a^2b)(-a^3)$

Simplify.

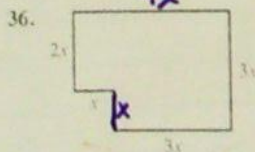
B

32.  $(2y)(4y^3) + (3y^2)(5y^2)$

34.  $(6x^2)(2x^2) - (3x^4)(4x^3)$

Find the perimeter and the area of each shaded region.  
(Area of rectangle = length  $\times$  width.)

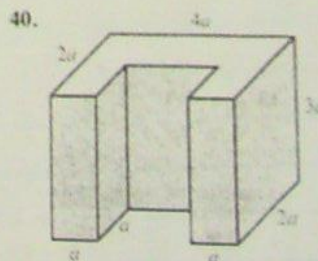
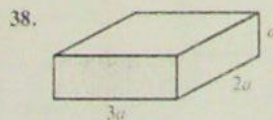
Perimeter



Area

Find the total surface area of each solid.

(The total surface area of a solid is the sum of the areas of all its faces.)



Simplify.

C

44.  $5^7 \cdot 5^4$

50.  $5^{2n} \cdot 5^{n+2} \cdot 5^0$

42.  $x^{3n} \cdot x^n$

48.  $x^2 \cdot x^n$

46.  $(-2)(-2)^{n-2}$

52.  $(3r^4)(kr^3)$