

HW: Power of Monomials/6-50 even (omit 34+38)

Warm up:

Simplify. *HINT: Try writing it in expanded form.*

$$1) (3^2)^5 = 3^2 \cdot 3^2 \cdot 3^2 \cdot 3^2 \cdot 3^2 = 3^{10}$$

$$2) (5^3)^7 = 5^3 \cdot 5^3 \cdot 5^3 \cdot 5^3 \cdot 5^3 \cdot 5^3 \cdot 5^3 = 5^{21}$$

$$\left(x^a\right)^b = x^{ab}$$

$$(2x)^3 = 2x \cdot 2x \cdot 2x = 8x^3$$

$$(5b)^3 = 125b^3$$

$$(5b^2)^3 = 5b^2 \cdot 5b^2 \cdot 5b^2 = 125b^6$$

$$(xy)^a = x^a y^a$$

$$(x^a y^b)^c = x^{ac} y^{bc}$$

$$(5x^7y^3)^2 \quad x^7 \cdot x^7 = x^{14}$$

$$25x^{14}y^6$$

$$\begin{aligned} & (-1)(-1)(-1) \left(-x^3 y^9 \right)^3 \\ & \left(x^3 \right)^3 = \\ & \left(y^9 \right)^3 = \\ & -x^9 y^{27} \end{aligned}$$

$$\frac{(4a^5b^{12})^2 (3b)^3}{}$$

$$16a^{10}b^{24} \cdot 27b^3$$

$$432a^{10}b^{27}$$

$$b^5 \cdot b^3$$

$$b \cdot b \cdot b \cdot b \cdot b \cdot b \cdot b \cdot b \cdot b$$

$$b^8$$

$$(3x^n)^2 (x^2)^n$$

$$9x^{2n} \cdot x^{2n}$$

$$9x^{4n}$$

$$\begin{array}{c}
 \text{w/2} \\
 \text{w/2} \\
 \text{w/2} \\
 \text{w/2}
 \end{array}
 \left(\frac{2}{3} x^5 y^7 \right)^3$$

$$x \cdot \frac{8}{27} x^{15} y^{21}$$

$$\frac{8}{27} x^{16} y^{21}$$

HW Solutions

7) k^4

8) m^6

9) $18q^6$

10) $35u^8v^4$

27) $2q^6$

28) $-12u^8$

29) $9w^8x^{12}$

30) $6y^{10}z^{11}$

31) $7b^{14}c^8d^6$

32) $-42f^5g^4h^4$

39) $20c^5d^5$

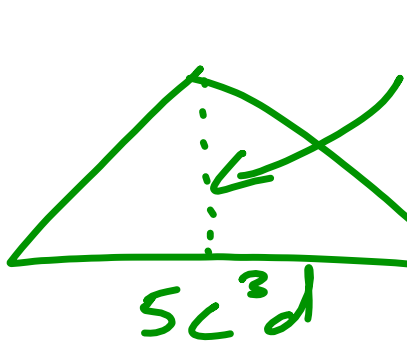
47) $30a^5b^7c^6$

48) $30x^5y^{11}z^6$

59) $15x^7$

60) $16x^9$

(39)



$8c^2d^4$

$$A = \frac{1}{2}bh$$
$$\frac{1}{2}(5c^3d)(8c^2d^4)$$
$$20c^5d^5$$

$$\textcircled{32} \quad (14fg^2h^2)(-3f^4g^2h^2)$$
$$\textcircled{-42f^5g^4h^4}$$

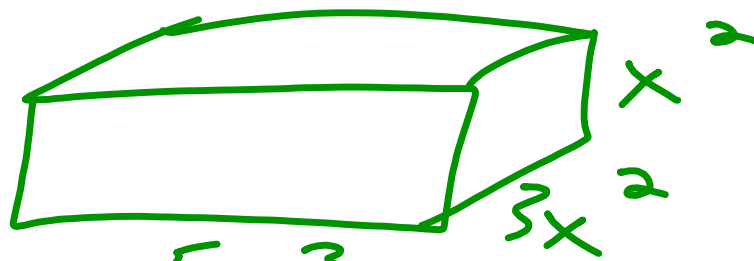
Q9 $(9w^2x^8)(w^6x^4)$

$9w^8x^{12}$

$$\textcircled{2} (q^2)(2q^4)$$

$$2q^6$$

(59)



$$5x^3 \cdot 3x^2 \cdot x^2$$

$$15x^7$$

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② 54a⁹b⁴

$$\begin{aligned} & \text{Q2} \quad 3^3 \\ & (3a^2b)^3 (2a^3b) \\ & 27a^6b^3 \cdot 2a^3b \\ & 54a^9b^4 \end{aligned}$$

$$\begin{aligned} & \textcircled{2} \\ & \frac{1}{2} \cdot \frac{1}{2} \cdot \frac{1}{2} \left(\frac{1}{2} p^2 q \right)^3 \left(2 p q^2 \right)^4 \\ & \frac{1}{8} p^6 q^3 \cdot 16 p^4 q^8 \\ & \textcircled{2 p^{10} q^{11}} \end{aligned}$$

Q9

$$\left[(2 \times 2)^2 \right]^2$$

$$\left[4 \times 4 \right]^2$$

$$16 \times 8$$

