

6.2 A Worksheet

Simplify.

1) $2n^2 \cdot n^4$

$2n^6$

2) $n^3 \cdot 4n^4 \cdot 2n^3$

$8n^{10}$

3) $4p \cdot 4p^4$

$16p^5$

4) $2x^2 \cdot x$

$2x^3$

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

$9x^6$

6) $2m \cdot 4m^4$

$8m^5$

7) $(n^3)^3$

n^9

8) $(2a^3)^2$

$4a^6$

9) $(n^4)^2$

n^8

10) $(3k^2)^4$

$81k^8$

11) $(2p)^4$

$16p^4$

12) $(4x^3)^3$

$64x^9$

Simplify. Your answer should contain only positive exponents.

13) $\frac{2k}{4k^4} = \frac{1}{2k^3}$

14) $\frac{3m^3}{4m^2} = \frac{3m}{4}$

15) $\frac{3p^3}{2p^3} = \frac{3}{2}$

16) $\frac{m}{4m^3} = \frac{1}{4m^2}$

17) $\frac{n^4}{n^3} = n$

18) $\frac{4m}{m^3} = \frac{4}{m^2}$

Simplify.

$$19) (m^2)^2 \cdot (2m^4)^2$$
$$m^4 \cdot 4m^8$$
$$4m^{12}$$

$$20) (p \cdot 2p^4)^2$$
$$p^2 \cdot 4p^8$$
$$4p^{10}$$

$$21) n^3 \cdot (n^4)^2$$
$$n^{11}$$

$$22) x^4 \cdot (x^2)^4$$
$$x^{12}$$

Simplify. Your answer should contain only positive exponents.

$$23) \frac{2x}{3xx^2} = \frac{2}{3x^2}$$

$$24) \frac{2r^2 \cdot 3r}{2r^4} = \frac{3}{r}$$

$$25) \frac{3b^2 \cdot b}{2b} = \frac{3b^2}{2}$$

$$26) \frac{2n^2 \cdot 4n^3}{4n^4} = 2n$$

$$27) \frac{2x^2 \cdot 2x^4}{3x} = \frac{4x^5}{3}$$

$$28) \frac{2v^2}{2v^2 \cdot v^4} = \frac{1}{v^4}$$

$$29) \frac{(b^2)^3 \cdot b}{2b} = \frac{b^6}{2}$$

$$30) \left(\frac{x^3}{x^4 x^2} \right)^2 = \frac{1}{x^6}$$