

Algebra Lesson 7-3B

Due Today: 7-3A p.341 #1-21 odds

**EXERCISES** 1.  $2^{10}$  3. 1 5.  $6^9$  7.  $c^5$  9.  $\frac{10}{t^7}$   
11.  $3x^4$  13.  $b^3$  15.  $-45a^4$  17.  $45x^7y^6$  19.  $x^{10}y^2$   
21.  $-\frac{240m^3}{r}$  23.  $6 \times 10^9$  25.  $3.4 \times 10^{-5}$

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Due Tomorrow: 7-3B p.341 #2-16 evens, #23-27 odds

**Rewrite each expression using each base only once.**

1.  $2^6 \cdot 2^4$

2.  $5^{-13} \cdot 5^5 \cdot 2^2$

3.  $10^{-6} \cdot 10^5 \cdot 10^1$

4.  $(0.99)^3 \cdot (0.99)^0$

5.  $6^6 \cdot 6^{-2} \cdot 6^5$

6.  $(1.025)^2(1.025)^{-2}$

**Simplify each expression.**

7.  $c^{-2} \cdot c^7$

8.  $3r \cdot r^4$

9.  $5t^{-2} \cdot 2t^{-5}$

10.  $(7x^5)(8x)$

11.  $3x^2 \cdot x^2$

12.  $(-2.4n^4)(2n^{-1})$

13.  $b^{-2} \cdot b^4 \cdot b$

14.  $(-2m^3)(3.5m^{-3})$

15.  $(15a^3)(-3a)$

16.  $(x^5y^2)(x^{-6}y)$

17.  $(5x^5)(3y^6)(3x^2)$

18.  $(4c^4)(ac^3)(3a^5c)$

19.  $x^6 \cdot y^2 \cdot x^4$

20.  $a^6b^3 \cdot a^2b^{-2}$

21.  $-m^2 \cdot 4r^3 \cdot 12r^{-4} \cdot 5m$

$$21. \quad \underline{-m^2} \cdot \underline{4r^3} \cdot \underline{12r^{-4}} \cdot \underline{5m}$$

$$-240m^3r^{-1}$$

$$\frac{-240m^3}{r}$$

$$3y^{-7} \cdot -2y^5$$

$$-6y^{-2}$$

$$\frac{-6}{y^2}$$

$$3x^{-5} \cdot 2x^4 \cdot 3z^{-1} \cdot y^{-4}$$

$$18x^{-1}z^{-1}y^{-4}$$

$$\frac{18}{xyz^4}$$

Name
Date
Period

$$1. (3x^5)(4x^3) \quad 12x^8$$

$$2. -2y^5 \cdot 3y^{-3} \quad -6y^2$$

**Algebra Lesson 7-3B**

**Open Firefox**

**[Go to torresmath.com](http://torresmath.com)**

$$(4 \times 10^3)(3 \times 10^6) = 4 \cdot 3 \cdot 10^3 \cdot 10^6$$

$$= 12 \times 10^9$$

$$= 1.2 \times 10^1 \times 10^9$$

$$\Rightarrow = 1.2 \times 10^{10}$$

$$(6 \times 10^{-3})(3 \times 10^7)$$

$$18 \cdot 10^4$$

$$1.8 \cdot 10^1 \cdot 10^4$$

$$1.8 \times 10^5$$

$$6 \cdot 3 \cdot 10^{-3} \cdot 10^7$$

$$18 \times 10^4$$

$$1.8 \times 10^1 \cdot 10^4$$

$$1.8 \times 10^5$$

1.  $2^6 \cdot 2^4$

2.  $5^{-13} \cdot 5^5 \cdot 2^2$

3.  $10^{-6} \cdot 10^5 \cdot 10^1$

4.  $(0.99)^3 \cdot \frac{1}{(0.99)^0} = (0.99)^3$

5.  $6^6 \cdot 6^{-2} \cdot 6^5$

6.  $(1.025)^2(1.025)^{-2}$

**Simplify each expression.**

7.  $c^{-2} \cdot c^7$

8.  $3r \cdot r^4$

9.  $5t^{-2} \cdot 2t^{-5}$

10.  $(7x^5)(8x)$

11.  $3x^2 \cdot x^2$

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13.  $b^{-2} \cdot b^4 \cdot b$

14.  $(-2m^3)(3.5m^{-3})$

15.  $(15a^3)(-3a)$

16.  $(x^5y^2)(x^{-6}y)$

17.  $(5x^5)(3y^6)(3x^2)$

18.  $(4c^4)(ac^3)(3a^5c)$

19.  $x^6 \cdot y^2 \cdot x^4$

20.  $a^6b^3 \cdot a^2b^{-2}$

21.  $-m^2 \cdot 4r^3 \cdot 12r^{-4} \cdot 5r$

**Simplify each expression. Write each answer in scientific notation.**

22.  $(2 \times 10^3)(3 \times 10^2)$

23.  $(2 \times 10^6)(3 \times 10^3)$

24.  $(4 \times 10^6) \cdot 10^{-3}$

25.  $(1 \times 10^3)(3.4 \times 10^{-8})$

26.  $(8 \times 10^{-5})(7 \times 10^{-3})$

27.  $(5 \times 10^7)(3 \times 10^{14})$

