

New Practice: Exponents III

1. Simplify each expression completely, leaving no negative exponents.

a.

$$\frac{a^{-7}b^2}{4a^3c^{-4}}$$

b.

$$\left(\frac{6x^{-1}}{y^{-3}}\right)^2$$

c.

$$(3x^2y)^3(2xy)$$

d.

$$-\left(\frac{5a^{10}}{3b^6}\right)^{-3}$$

e.

$$\frac{-5y^2}{-15xy^4}$$

f.

$$5x^4(-2x^0y + 3x^3y^2)$$

2. Circle the three expressions that **cannot** be simplified.

a. $a^2(-a^3)$	b. $2x^4 + 6xy^4$	c. $4x(3xy^2)$
d. $(a^4)(b^2)$	e. $\frac{x^3}{-3y^2}$	f. $4a^3b^0 + a^{-8}$

3. Complete the table

	Standard Notation	Scientific Notation
a.	0.0000058	
b.	0.00000003	
c.		6.2×10^{-5}
d.		2.0×10^{-7}

Use the rules of exponents to simplify. Show appropriate work. Answers should be in scientific notation

4.
$$\frac{(2.3 \times 10^{-3})(4.2 \times 10^9)}{8.7 \times 10^3}$$

5.
$$\frac{(3.5 \times 10^4)(1.2 \times 10^{-1})}{(2.4 \times 10^{-2})}$$

Thinking Back: Foundational Skills Review on Solving Equations

Solve #6-9.

6. $2x - 1 = 5$	7. $1 - \frac{t}{4} = -2$
8. $-11 = \frac{2n}{3} - 7$	9. $6 - 3x = 9$

Answer each question based on information from the *Studying and Learning Math* reading or from previous Brain-Based Learning readings.

10. Briefly summarize (one sentence for each) the three ways in which learning math presents unique challenges to some people.

11. Based on Spitzer’s research, what should you do to help remember material from class?

12. Statements about the story of Ed and Nick are given below. Indicate if each is true (T) or False (F).

Ed and Nick found that....

____ They needed to spend more time studying to learn math.

____ Shorter studying blocks were more effective than longer blocks.

____ They weren’t smart enough to do math.

____ They did better on tests if they studied several hours the night before.

____ Taking breaks during studying helped them learn better.

13. On the line below, indicate how **important** it is to you to study for this class (with 10 being the highest).



Why did you choose this number and not a lower number?

14. On the line below, indicate how **confident** are you that know how to study for this class (with 10 being the highest).



Why did you choose this number and not a lower number?

15. Reference information from **at least two** of the readings to answer this question:
how do using physical objects like the factor tiles support learning?