

Name: Key

QUARTER 1 REVIEW
ALL REVIEW - PRE-ASSESSMENT

Simplify.

$$x^3 \cdot x^5 = x^8$$

$$(2x^5)^3 = 2^3 x^{15} = 8x^{15}$$

$$\frac{x^{12}}{x^5} = x^7$$

$$3^{-2} = \frac{1}{9}$$

$$\frac{x^{-5} \cdot x^4}{y^2 \cdot y^{-9}} = \frac{x^{-1} y^9}{y^2 x^5} = \frac{y^7}{x}$$

$$\frac{(xy)^0}{4} = \frac{1}{4}$$

Does the table represent linear or exponential?

x	-2	-1	0	1	2
y	45	3	0.2	.013	.0008

$\div 15$
exp decay

Does the equation represent exponential growth or decay?

$$y = 4^x$$

growth

$$y = -2 \cdot \left(\frac{1}{8}\right)^x$$

decay

Mrs. Berenson eats 10 candy bars on Monday. Every day she eats 1% more. How many is she eating in 40 days?

$$10(1 + .01)^{40}$$

14.8

14 bars

Classify $4x^3 - 4x$

binomial
cubic

Subtract $(3x^3 - 2x^2 + 10x) - (4x^3 + 2x^2 - 5)$

$$3x^3 - 2x^2 + 10x - 4x^3 - 2x^2 + 5$$

$$-x^3 - 4x^2 + 10x + 5$$

Multiply $(4x - 1)(x + 3)$

$$4x^2 - x + 12x - 3$$

$$4x^2 + 11x - 3$$