

Question #1

$$\log_7 49 = 2$$

$$3^5 = 243$$

Question #2

$$y = e^x + 2$$

Question #3

$$\frac{1}{2}^x = 8 \quad x = -3$$

Question #4

Decay

80% decrease

Question #5

$$4^{5x-2} = 4^2$$

so

$$5x-2 = 2$$

$$5x = 4$$

$$x = \frac{4}{5}$$

Question #6

$$4' = 10x + 6$$

$$-2 = 10x$$

$$\frac{-2}{10} = x$$

$$-\frac{1}{5} = x$$

Question 7

right 3

up 1

$$D: x > 3$$

$$R: \mathbb{R}$$

$$x = 3$$

Question 8

$$\frac{x}{2x+7} = \frac{x-5}{x-1}$$

$$x(x-1) = (2x+7)(x-5)$$

$$x^2 - x = 2x^2 - 3x - 35$$

$$0 = x^2 - 2x - 35$$

$$(x-7)(x+5)$$

$$x = 7, x = -5$$

Question 9

$$\log_7 8, \log_5 23, \log_6 38, \log_2 10$$