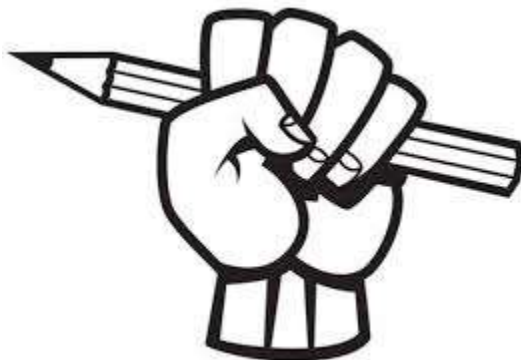


Name:

Period:



## Unit 2 Practice Test

### No Calculators

Question 1. Solve each of the below.

$$5^{-3} =$$

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

$$\frac{1}{7^{-2}} =$$

$$(-3)^{-3} =$$

$$(-10)^3 =$$

$$(-9)^1 =$$

$$10^{-3} =$$

$$(-9)^0 =$$

Question 2. Solve each of the below.

$$5^3 \times 5^4 = 5^a$$

$$a =$$

$$5^{-3} \times 5^{-4} = 5^e$$

$$e =$$

$$4^2 \times 4^8 = 4^b$$

$$b =$$

$$4^{-2} \times 4^8 = 4^f$$

$$f =$$

$$2^5 \times 2^c = 2^{15}$$

$$c =$$

$$\frac{1}{2^5} \times 2^g = 2^{-8}$$

$$g =$$

$$3^d \times 3^4 = 3^{12}$$

$$d =$$

$$\frac{1}{3^{-2}} \times 3^h = 3^{10}$$

$$h =$$

Question 3. Solve each of the below.

$$5^{12} \div 5^3 = 5^a$$

$$a =$$

$$9^8 \div 9^{-2} = 9^e$$

$$e =$$

$$\frac{4^{15}}{4^5} = 4^b$$

$$b =$$

$$\frac{3^{-15}}{3^3} = 3^f$$

$$f =$$

$$2^{20} \div 2^c = 2^4$$

$$c =$$

$$\frac{1}{2^6} \div 2^g = 2^{-10}$$

$$g =$$

$$\frac{8^d}{8^{10}} = 8^5$$

$$d =$$

$$\frac{1}{3^{-4}} \div 3^h = 3^{12}$$

$$h =$$

Question 4. Solve each of the below.

$$(5^3)^4 = 5^a$$

$$a =$$

$$(5^3)^e = 5^{15}$$

$$e =$$

$$(2^5)^3 = 2^b$$

$$b =$$

$$(2^{-5})^4 = 2^f$$

$$f =$$

$$(3^4 \times 3^5)^2 = 3^c$$

$$c =$$

$$(3^{-2})^{-5} = 3^g$$

$$g =$$

$$(7^5 \div 7^2)^4 = 7^d$$

$$d =$$

$$(7^7 \div 7^h)^2 = 7^{-6}$$

$$h =$$

**BONUS**  
**(Page 1 of 2)**

$$\frac{6^4}{2^4 \times 27} =$$

$$\frac{45^4}{81^2 \times 125} =$$

**BONUS**  
**(Page 2 of 2)**

$$\frac{20^4}{25^2 \times 16 \times 16} =$$

$$\frac{81^{-50}}{3^{-20}} =$$