

Name _____ Period _____ Date _____

Negative Exponents

Write out each expression as a fraction and as a decimal.

1. 10^{-1}

2. 10^{-3}

3. 10^{-5}

4. 10^{-6}

5. 10^{-2}

6. 10^{-7}

Write out each expression as a fraction.

7. 3^{-4}

8. 9^{-2}

9. 5^{-3}

10. 7^{-2}

11. 2^{-6}

12. 3^{-3}

13. 3^{-2}

14. 5^{-2}

15. 4^{-2}

16. 8^{-2}

17. 12^{-2}

18. 4^{-3}

19. 1^{-4}

20. 6^{-2}

21. 6^{-3}

Name ANSWER KEY Period _____ Date _____

Negative Exponents

Write out each expression as a fraction and as a decimal.

1. 10^{-1}

$$\frac{1}{10} = 0.1$$

2. 10^{-3}

$$\frac{1}{1,000} = 0.001$$

3. 10^{-5}

$$\frac{1}{100,000} = 0.00001$$

4. 10^{-6}

$$\frac{1}{1,000,000} = 0.000001$$

5. 10^{-2}

$$\frac{1}{100} = 0.01$$

6. 10^{-7}

$$\frac{1}{10,000,000} = 0.0000001$$

Write out each expression as a fraction.

7. 3^{-4}

$$\frac{1}{3 \times 3 \times 3 \times 3} = \frac{1}{81}$$

8. 9^{-2}

$$\frac{1}{9 \times 9} = \frac{1}{81}$$

9. 5^{-3}

$$\frac{1}{5 \times 5 \times 5} = \frac{1}{125}$$

10. 7^{-2}

$$\frac{1}{7 \times 7} = \frac{1}{49}$$

11. 2^{-6}

$$\frac{1}{2 \times 2 \times 2 \times 2 \times 2 \times 2} = \frac{1}{64}$$

12. 3^{-3}

$$\frac{1}{3 \times 3 \times 3} = \frac{1}{27}$$

13. 3^{-2}

$$\frac{1}{3 \times 3} = \frac{1}{9}$$

14. 5^{-2}

$$\frac{1}{5 \times 5} = \frac{1}{25}$$

15. 4^{-2}

$$\frac{1}{4 \times 4} = \frac{1}{16}$$

16. 8^{-2}

$$\frac{1}{8 \times 8} = \frac{1}{64}$$

17. 12^{-2}

$$\frac{1}{12 \times 12} = \frac{1}{144}$$

18. 4^{-3}

$$\frac{1}{4 \times 4 \times 4} = \frac{1}{64}$$

19. 1^{-4}

$$\frac{1}{1 \times 1 \times 1 \times 1} = \frac{1}{1}$$

20. 6^{-2}

$$\frac{1}{6 \times 6} = \frac{1}{36}$$

21. 6^{-3}

$$\frac{1}{6 \times 6 \times 6} = \frac{1}{216}$$