

Honors 1

Name: _____

Chapter 7 PRACTICE TEST

Simplify the expression in #1-6. Don't leave an answer with a negative exponent.

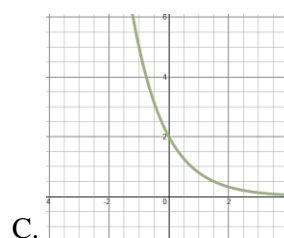
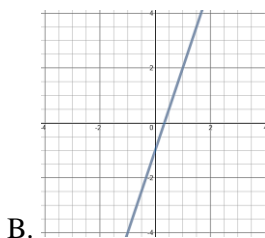
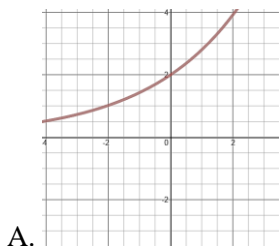
1. $(3x^4)(-5x^6)$	2. $(-3x^4)^5$	3. $\left(\frac{4x^3y^6}{3x^5y}\right)^3$
4. $\frac{42x^2y^{-12}}{-16x^{-5}y^{-3}z^2}$	5. $\left(\frac{a^4c^{-7}}{d^5}\right)\left(\frac{5a^{-12}c^{17}}{d^{-2}}\right)^0$	6. $\left(\frac{5x^2}{2y}\right)^3 \cdot \left(\frac{y^3}{2x^{-1}}\right)^{-2}$
7. Simplify. $\sqrt{64x^5}$	8. Write with radicals. $5x^{\frac{1}{3}}$	9. Compute. $16^{\frac{3}{2}}$

10. Convert 1.255×10^6 to standard form.	11. Convert 0.0003402 to scientific notation.	12. Solve $9^{x-3} = 81$
13. What is the area of a triangle whose height is $14x^2y$ and base is $3x^5y^3$?	14. For every increase of 1 on the Richter scale an earthquake releases approximately 31 <i>times</i> as much energy. How much more energy does an earthquake measuring 8 release than one measuring 5?	15. Evaluate the following and write your answer in scientific notation. $\frac{5.8 \times 10^{16}}{(2.47 \times 10^3)(3 \times 10^{-2})}$

Match the function with its graph (yes, not every graph will be used).

16. _____ $f(x) = 3x - 1$

17. _____ $f(x) = 2(1.4)^x$



Write a rule for the function based on the table.

<p>18.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 10%;">x</td> <td style="width: 10%;">-2</td> <td style="width: 10%;">-1</td> <td style="width: 10%;">0</td> <td style="width: 10%;">1</td> <td style="width: 10%;">2</td> </tr> <tr> <td>y</td> <td>.125</td> <td>.25</td> <td>.5</td> <td>1</td> <td>2</td> </tr> </table>	x	-2	-1	0	1	2	y	.125	.25	.5	1	2	<p>19.</p> <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td style="width: 10%;">x</td> <td style="width: 10%;">-2</td> <td style="width: 10%;">-1</td> <td style="width: 10%;">0</td> <td style="width: 10%;">1</td> <td style="width: 10%;">2</td> </tr> <tr> <td>y</td> <td>256</td> <td>64</td> <td>16</td> <td>4</td> <td>1</td> </tr> </table>	x	-2	-1	0	1	2	y	256	64	16	4	1
x	-2	-1	0	1	2																				
y	.125	.25	.5	1	2																				
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y	256	64	16	4	1																				

Use this information:

You bought a pair of autographed Michael Jordan shoes for \$75 in 2008. The shoes appreciate (increases value) at a rate of 20% annually.

20. Write an exponential growth equation that represents the situation.

21. Find the value of the shoes in 2016.

Use this information:

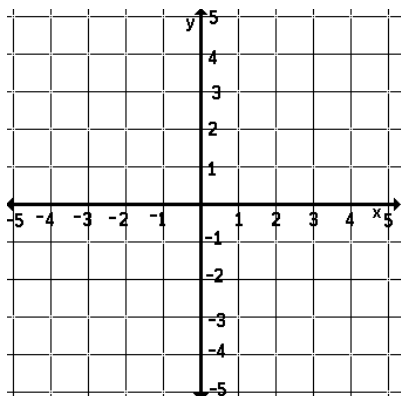
A block of Mathonium™ decays 12% per day. You started with 45kg of Mathonium™.

22. Write an equation that represents the amount of Mathonium™ remaining after d days.

23. Find the mass of the Mathonium™ after 2 weeks.

Graph the functions then state the domain and range

24. $y = -3^x$

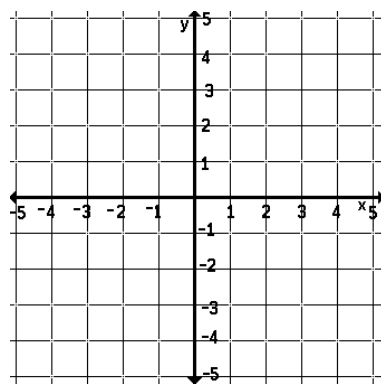


x	y
-2	
-1	
0	
1	
2	

Domain:

Range:

25. $y = \frac{1}{2}(2)^x$



x	y
-2	
-1	
0	
1	
2	

Domain:

Range: