

Algebra 2 - Exponential Practice

Learning Target: *I can write an exponential equation through two points.*

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|----------------------------|---|--------------------------|
| 1. $(1,10), (2,25)$ | 2. $\left(2, 10\frac{2}{3}\right), (-1, 4.5)$ | 3. $(2,6), (4,54)$ |
| 4. $(-2, 0.05), (2, 12.8)$ | 5. $(2, 128), (-1, 16)$ | 6. $(-1, 12.25), (1, 4)$ |

Learning Target: *I can write an exponential equation given an initial value and a rate.*

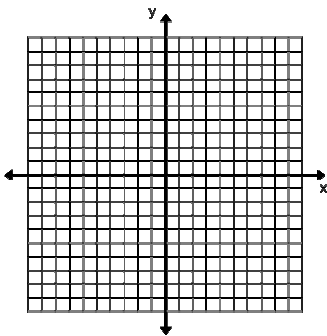
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|---|---|--|
| 7. Initial Value: 1
Growth Factor: 10 | 8. Initial Value: 327
Decrease of 95% per year | 9. Initial Value: 1.023
Decrease of 2% per second |
| 10. Initial Value: 0.5
Increase of 67% per month | 11. Initial Value: 9.2
Increase of 130% per decade | 12. Initial Value: 4.1
Decay Factor: 0.72 |

Determine whether each equation represents exponential growth or decay. State the initial value and the rate of increase/decrease.

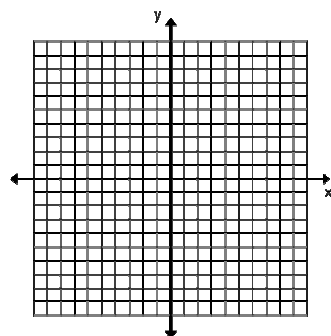
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|--------------------|--------------------|------------------|
| 13. $y = 2(0.9)^x$ | 14. $y = 8(1.3)^x$ | 15. $y = 1.14^x$ |
|--------------------|--------------------|------------------|

Learning Target: *I can graph transformations of exponential functions.*

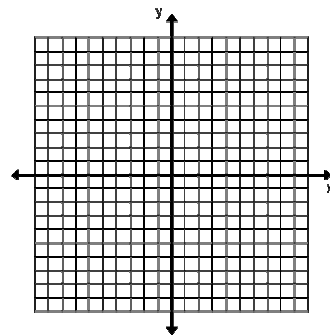
16. $y = 3^x$



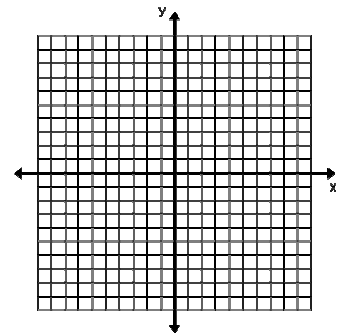
17. $y = 2(4)^x$



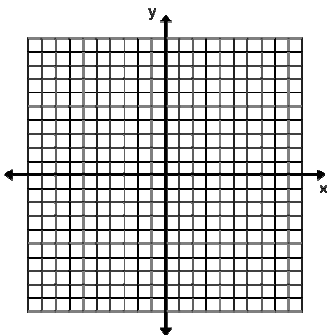
18. $y = 2^{-x}$



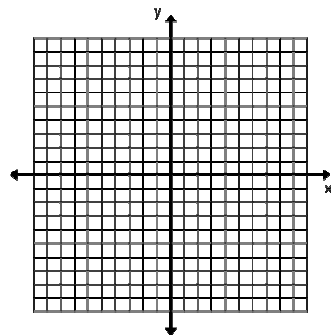
19. $y = \left(\frac{1}{4}\right)^{x+5}$



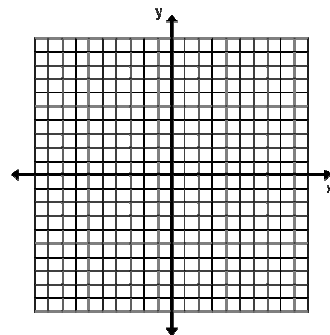
20. $y = 8^x - 4$



21. $y = 3^{x-2}$



22. $y = -0.1^x + 3$



23. $y = 4\left(\frac{1}{2}\right)^{x+1} - 6$

