Transformations

Unit 3: Comparing Functions - Modeling & Transformations

Rewrite the given equation applying the given transformation:

Linear Transformations:

1. y = -2x translated up 8 units	2. y = 3x translated down 10 units
3. y = x translated up 2 units	4. y = $\frac{-1}{2}x$ translated down 3 units
5. $y = \frac{3}{4}x$ translated up $\frac{8}{9}$ of an unit	6. $y = -\frac{2}{3}x$ translated down $\frac{4}{5}$ of an unit.

Exponential Transformations:

7. $y = 2(3)^x$ translated 2 units to the right, and 5 units down.	8. $y = -5\left(\frac{1}{2}\right)^x$ translated 5 units left, and 3 units down.
9. $y = -\frac{6}{5}(2)^x$ translated 9 units to the right, and up 4 units.	10. $y = -\frac{2}{3}\left(\frac{1}{4}\right)^x$ translated 10 units left, and 15 units up.
11. $y = 9(5)^x$ translated 6 units to the left, and 7 units down.	12. $y = 6(7)^x$ translated 7 units to the right, and 1 unit up.

Quadratic Transformations

13. $y = 5x^2$ translated 2 units to the right.	14. $y = x^2$ translated 2 units down.
15. $y = -x^2$ translated 5 units to the left, and 2 units down.	16. $y = -7x^2$ translated 4 units up.
17. $y = 10x^2$ translated 7 units to the right, and 6 units up.	18. $y = -3x^2$ translated 9 units left.