

Transformations - Exercises (2 pages; 19/2/20)

Key to difficulty:

* easier

** moderate

*** harder

(1***) Suppose that we wish to reflect $y = f(x)$ in the line $x = a$. What combination of transformations could be used to do this?

(2***) Find the equation of the line resulting from the reflection of $y = 2x + 1$ in the line $x = 1$.

(3**) Describe the transformation represented by $y = e^x \rightarrow y = e^{4-x}$

(4**) What happens to the graph of $y = f(x)$ when it is transformed to:

(a) $y = f(|x|)$ (b) $|y| = f(x)$

(5**) What combination of transformations converts $y = 2^x$ to $y = 2^{4x-2}$?

(6*) Find the equation of the function resulting from a translation of $\begin{pmatrix} 1 \\ 2 \end{pmatrix}$ of $y = 2x + 1$