Logarithms - Exercises (1 page; 21/2/20)

Key to difficulty:

* easier

** moderate

*** harder

(1*) Show that $\log\left(4-\sqrt{15}\right) = -\log\left(4+\sqrt{15}\right)$

(2*) If $k = log_{24}12$, write the following in terms of k:

(a) $log_{24}2$ (b) $log_{24}6$

(3*) Is $log_2 3 > \frac{3}{2}$?

(4*) Write $log_2 3$ in terms of logs to the base 10

(5*) Simplify $\frac{log_x b}{log_x a}$

(6*) [Linear interpolation] By approximating the graph of $y = log_2 x$ by a straight line between $x = 2$ and $x = 4$, find an approximate value for $log_2\left(\frac{5}{2}\right)$