CSC165H1 Problem Set 0

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My Courses

- CSC165H1, Mathematical Expression and Reasoning for Computer Science, David Liu.

- CSC148H1, Introduction to Computer Science, Diane Horton.

- FOR201H1, Conservation of Tropical and Subtropical Forests.

- MAT135H1, Calculus I(B), Larissa Richards.

- MAT223H1, Linear Algebra I, Mihai Nica.

- NFS284H1, Basic Human Nutrition, Debbie Gurfinkel, Thomas Wolever.

Set notation

$$S_1 \cap S_2 = \big\{2, 4, 6, 8, 10, 12, 14\big\}$$

A truth table

p	q	r	$\neg q$	$p \vee \neg q$	$p \Leftrightarrow r$	$(p \vee \neg q) \Rightarrow (p \Leftrightarrow r)$
T	T	T	F	T	T	T
T	T	F	F	T	F	F
T	F	T	T	T	T	T
T	F	F	T	T	F	F
F	T	T	F	F	F	T
F	T	F	F	F	T	T
F	F	T	T	T	F	F
F	F	F	T	T	T	T

A calculation

$$\log_x(3\sqrt{x}) = k$$
$$x^k = 3x^{\frac{1}{2}}$$
$$x^{k-\frac{1}{2}} = 3$$
$$x^{\frac{2k-1}{2}} = 3$$
$$x = 3^{\frac{2}{2k-2}}$$