

CSC165H1: Problem Set 0

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My Courses

- CSC165H1, Mathematical Expression and Reasoning for Computer Science, Francois Pitt
- CSC207H1, Software Design, Lindsey Shorser
- JGI216H1, Globalization and Urban Change, Tim Ross
- MAT224H1, Linear Algebra II, Nicholas Hoell
- STA247H1, Probability with Computer Applications, Karen Huynh Wong
- MAT237Y1, Multivariable Calculus, Luis Emilio Garcia Martinez

Set notation

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

A truth table

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

A calculation

$$\log_x(3\sqrt{x}) = k$$

$$\log_x(3) + \log_x(\sqrt{x}) = k$$

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

$$\log_x(3) + \frac{1}{2} = k$$

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

$$x^{\frac{2k-1}{2}} = 3$$

$$x = 3^{\frac{2}{2k-1}}$$