

September 14, 2014

$$\frac{\frac{7}{5} \cdot \frac{2}{3x}}{\frac{3}{15x^2}} = \frac{\frac{21x-10}{15x}}{\frac{3}{15x^2}}$$

$$= \frac{21x-10}{15x} \cdot \frac{15x}{3}$$

$$= \frac{\cancel{15x} \cdot (21x-10)}{3}$$

$$= \frac{21x^2 - 10x}{3}$$

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$$\frac{\frac{2}{5} - \frac{3}{x}}{\frac{2}{5x^2}} = \frac{\frac{2x-15}{5x}}{\frac{2}{5x^2}}$$

$$= \frac{2x-15}{5x} \cdot \frac{5x}{2}$$

$$= \frac{x(2x-15)}{2}$$

$$\frac{2x^2 - 15x}{2}$$

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$$\frac{1}{3} + \frac{1}{3} \cdot 6 + 3 \div \frac{1}{2} - \frac{1}{3}$$

$$\frac{1}{3} + 2 + 3 \div \frac{1}{2} - \frac{1}{3}$$

$$\frac{1}{3} + 2 + 6 - \frac{1}{3}$$

$$\frac{1+6}{3} + 2 - \frac{1}{3}$$

$$\frac{7}{3} + 2 - \frac{1}{3}$$

$$\frac{7+18}{3} - \frac{1}{3} = \frac{25-1}{3} = \frac{24}{3} = 8$$

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- ### Order of Operations
- Simplify Grouping Symbols
(), [], { }, $\frac{a}{b}$, $|a|$, \sqrt{a}
 - Evaluate Exponents
 $5^3 = 5 \cdot 5 \cdot 5 = 25 \cdot 5 = 125$
 - \times or \div - which ever comes first from $L \rightarrow R$
 - $+$ or $-$ - which ever comes first from $L \rightarrow R$

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What is a function?

- Relation: a collection of ordered pairs
(x, y)
(Horizontal Axis, Vertical Axis)
(Domain, Range)
- Function: is a special case of a relation
Def.: a special type of relation in which a member of the domain is paired with exactly one member of the range.

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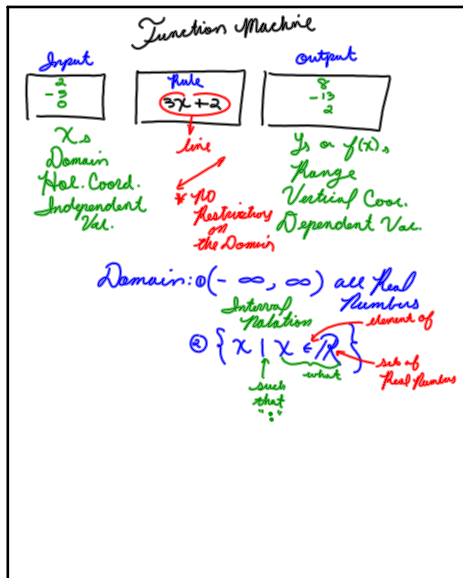
Not a function

$$S = \{(2, 5), (-3, 9), (2, 8), (6, -11)\}$$

$$D: \{2, -3, 6\}$$

$$R: \{5, 9, 8, -11\}$$

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