Unit 3: Relations, functions, and graphs

Table, Graph, Formula
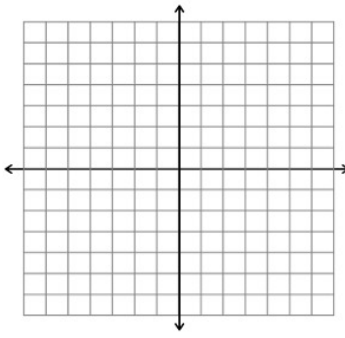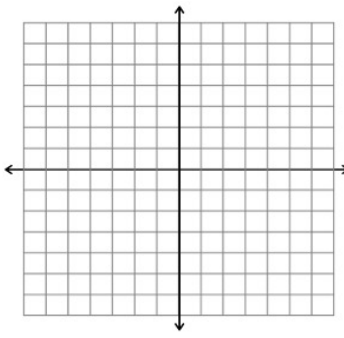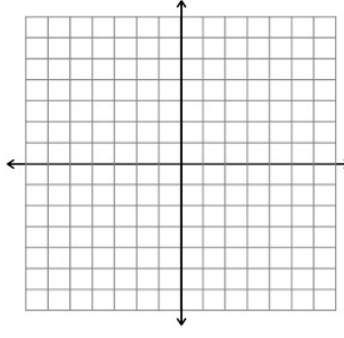
(Chapter 3, page 104)

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	Relation is set of ordered pairs. Domain: _____ Range: _____ ---- Examples:	Definition Page 107
	Graph Terms to know: ---- Cartesian coordinate system; Origin ---- Quadrants ---- x-axis, y-axis ---- Coordinate of a point ---- x-coordinate, abscissa ; y-coordinate, ordinate	Page 110
	Function Relation in which each input has exactly one output. ---- <u>Vertical line test</u>	Page 117 (plot examples in the next table cell)
	One-to-One function Function in which each output originated from exactly one input. ---- <u>Horizontal line test</u>	

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Plot an example of a relation, a function, and one-to-one function.

Relation	Function	One-to-one function

Domain:
Range:
Vertical line test:
Horizontal line test:

Function composition	Definition Page 149

$f(x) = 3x + 5 \qquad ; \qquad g(x) = x + 2$

$f\big(g(x)\big) = $ _____

(Hint: $f(\blacksquare) = 3\blacksquare + 5$, and $\blacksquare = x + 2$)

$g\big(f(x)\big) = $ _____

Notation: $f\big(g(x)\big) = f \circ g$