Name: **Date:** **Period:**

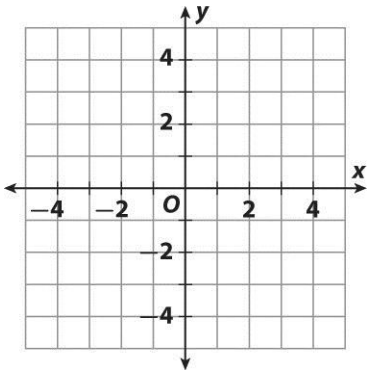
LESSON 2-1

WS 2.1C: Graphing Absolute Value Functions

Practice and Problem Solving: C

Graph each function. Then identify the vertex, domain, and range.

1. $f(x) = 2|x - 3| - 4$



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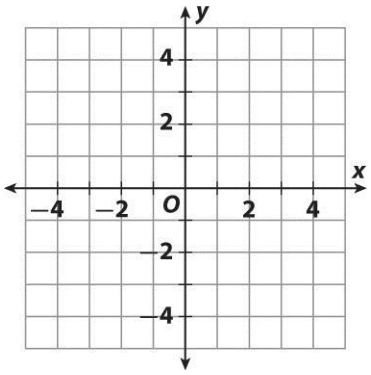
2. $f(x) = -\frac{1}{3}|-x + 2| + 2$



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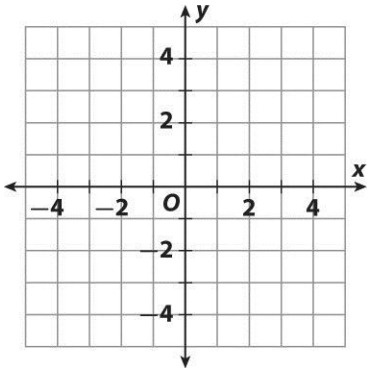
3. $f(x) = -|2x - 5| + 1$



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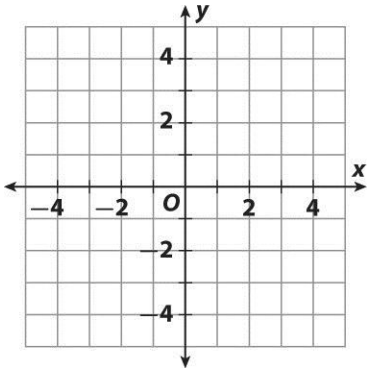
4. $f(x) = \frac{2}{3}|1 - x| - 2$



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Solve.

5. Let *a*, *b*, and *c* be positive integers. Find the vertex, domain and range of the function $f(x) = |ax + b| + c$.

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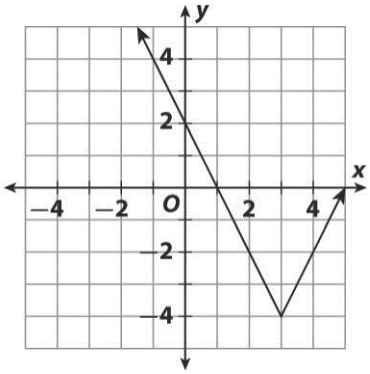
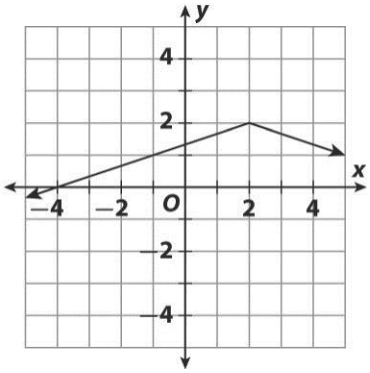
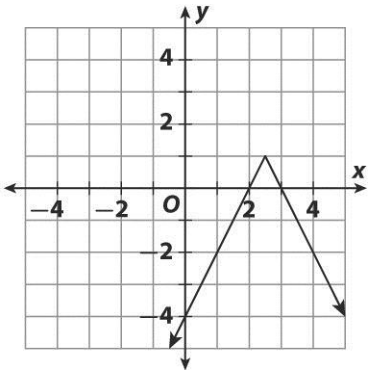
Answers to Practice and Problem Solving: WS 2.1C

1. 

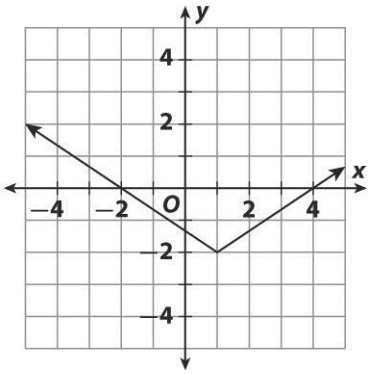
Vertex: (3, −4); Domain: all reals; Range: all reals ≥ −4

2. 

Vertex: (2, 2); Domain: all reals; Range: all reals ≤ 2

3. 

Vertex: (2.5, 1); Domain: all reals; Range: all reals ≤ 1

4. 

Vertex: (1, −2); Domain: all reals; Range: all reals ≥ −2

5. Vertex: $\left(-\frac{b}{a}, c\right)$; Domain: all reals; Range: all reals ≥ c