MATH 118: Quiz 5

Name: Key

Directions:

- Show your thought process (commonly said as "show your work") when solving each problem for full credit.
- If you do not know how to solve a problem, try your best and/or explain in English what you would do.
- Good luck!

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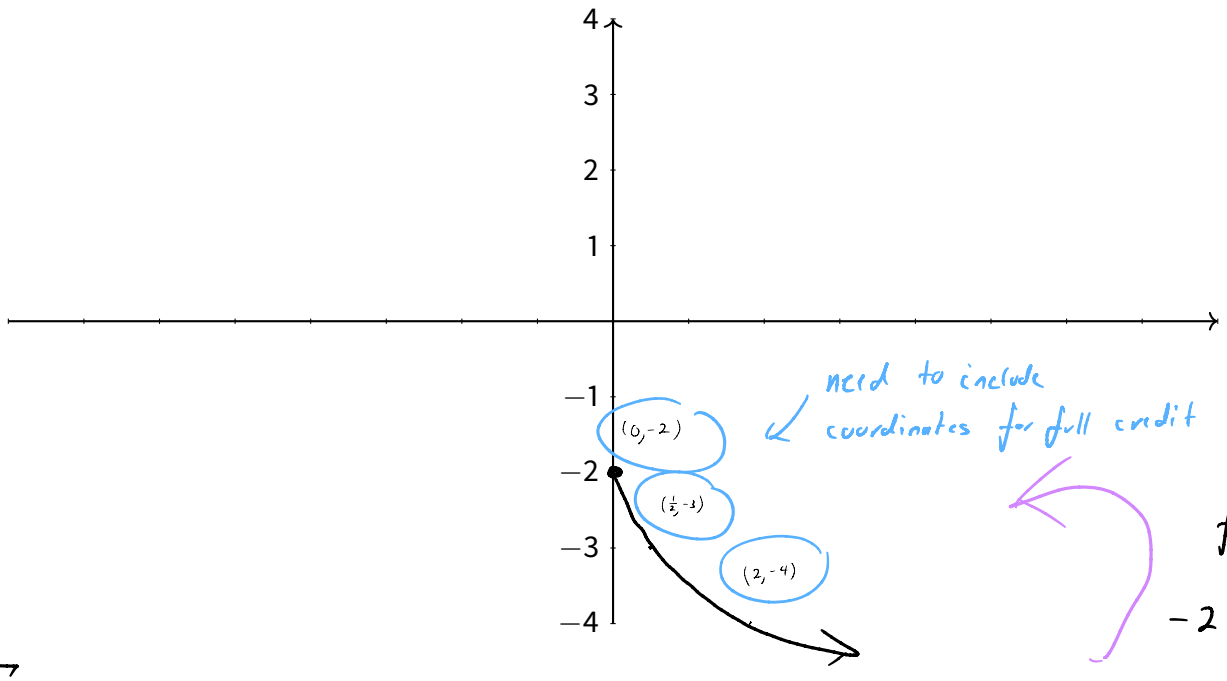
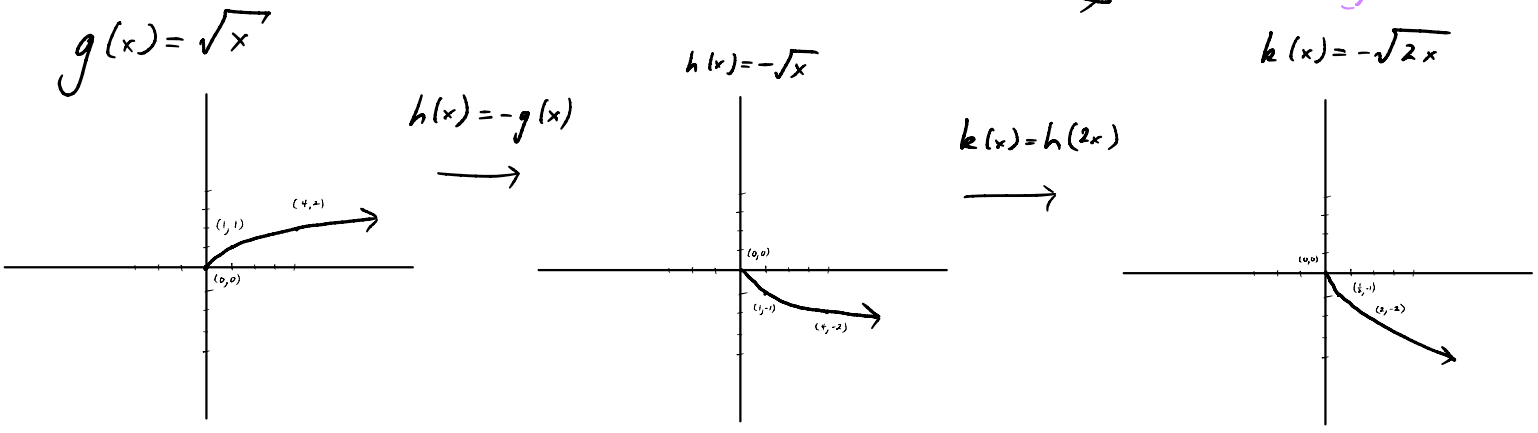
1. Use transformations to graph $f(x) = -2 - \sqrt{2x}$





2. Suppose

$$f(x) = x^2 + x \qquad g(x) = 2 - x$$

Evaluate the following and expand/combine like terms:

(a) $g \circ f$ $= g(f(x))$

$= g(x^2 + x)$

$= 2 - (x^2 + x) = \boxed{2 - x^2 - x}$

(b) $g \circ g$ $= g(g(x))$

$= g(2 - x)$

$= 2 - (2 - x)$

$= 2 - 2 + x = \boxed{x}$

(c) $f(g(0))$ $= f(2 - 0)$

$= f(2)$

$= 2^2 + 2$

$= 4 + 2$

$= \boxed{6}$ 1 pt