

Due: see webpage

Section: _____

1. a) Find the domain of the function $f(x) = \sqrt{x+7}$

b) Solve the following given equation $-5 + \sqrt{x+7} = x$

c) Show the “checks” to identify extraneous solutions

d) List the solution(s)

2. Rationalize the denominator:

$$\frac{\sqrt{2} - 4\sqrt{5}}{2\sqrt{3} + 3\sqrt{7}}$$

3. Subtract the following two complex numbers. *Simplify as much as possible.*

$$(7 - 4i) - (2 + 3i) =$$

4. Multiply and express the answer as a simplified complex number:

$$(2 + 5i)(3 - 2i) =$$