

- 1) Find the domain of the following. Write your answer in interval notation. (2 points each)

a) $g(x) = \sqrt{8-5x}$

b) $h(x) = \frac{1}{\sqrt{2x+1}}$

- 2) Simplify the following expressions: (2 points each)

a) $\frac{15\sqrt{8}}{4} - \frac{2\sqrt{2}}{5}$

b) $2\sqrt[4]{64} - \sqrt[4]{324} + \sqrt[4]{4}$

c) $5\sqrt[3]{\frac{n^4}{125}} - 2\sqrt[3]{n}$

d) $\sqrt{64x^3} - \sqrt{x} + 3\sqrt{x}$

3. Solve the following equations:

(2 points each)

a) $(4 - 2x)^2 = 100$

b) $2t^3 = -128$

4. Multiply and simplify

(2 points each)

a) $(3 + 2\sqrt{3})(4 - 3\sqrt{3})$

b) $(\sqrt{x} - 7)(\sqrt{x} + 8)$