

Review and Extra Homework Problems (II)

Question 1, Memorize the derivatives of trigonometric functions (Section 3.5, formulae on p173, HW p175, #15).

Question 2, What is the chain rule ? (Section 3.6, p177-183, HW p183, #15, 24).

Question 3, (a) How can we take implicit differentiation ? (Section 3.7, p185-190, HW p190, #17).

(b) How can we find an equation of the tangent line to a curve ? (Section 3.7, p185-190, HW p190, #27, 29).

Question 4, How can we find higher derivatives ? (Section 3.8, p192-196, HW p195, #11, 39).

Question 5, How can we use related rates to find derivatives ? (Section 3.9, p199-203, p202, Example 4, HW p203, #9, 21).

Question 6, How can we use linear approximation and differentials to find relative errors? (Section 3.10, p205-211, p210, Example 5, HW p212, #41).

Question 7, How can we find the local max/min of f using f' ? (a) Section 4.1, p223-230, p227, Theorem 7,

(b) What is the first derivative test ? Section 4.3, p241, HW p247, #5, 17.

Question 8, What is the Mean Value Theorem ? (Section 4.2, p235, p237, Example 5, HW p239, #24).

Question 9, (a) How do derivatives affect the shape of a graph ? (Section 4.3, p240-247)

(b) What is the concavity test ? (Section 4.3, p243)

(c) What are the inflection points of a function ? (Section 4.3, p244, HW p248 #25

(d))

(d) What is the second derivative test ? (Section 4.3, p245, HW p249, #41)