

Exercise. A variant of Exercise 1.1.7 adf (so there are parts a, d, and f but not b,c,e).

§1.1

Following is a statement of a theorem which can be proven using the quadratic formula. For this theorem, a , b , and c are real numbers.

Theorem 7. If f is a quadratic function of the form $f(x) = ax^2 + bx + c$ and $ac < 0$, then the function f has two x -intercepts.

Using only this Theorem 7, what can be concluded about the functions given by the following formulas? Justify your answer using complete sentences. Read instructions carefully!

a. $g(x) = -8x^2 + 5x - 2$

Put answer here.

d. $j(x) = -\frac{71}{99}x^2 + 210$

Put answer here.

f. $F(x) = -x^4 + x^3 + 9$

Put answer here.