

Create a “max / min” statement for each of the following relations. It may be necessary to put the relation into proper form before a max / min statement can be made.

a) $y = 3(x - 5)^2 + 12$

The **minimum** value of y is **12** when x is **5**.

b) $y = -7(x + 4)^2 - 16$

The _____ value of _____ is _____ when _____ is _____.

c) $e = 10(b + 20)^2 - 30$

The _____ value of _____ is _____ when _____ is _____.

d) $f = -1000(g - 5400)^2 + 2000000$

The _____ value of _____ is _____ when _____ is _____.

e) $r = 450(s + 6)^2 - 15000$

The _____ value of _____ is _____ when _____ is _____.

f) $p = \frac{1}{2}\left(y - \frac{3}{7}\right)^2 + \frac{1}{5}$

The _____ value of _____ is _____ when _____ is _____.

g) $d = -100k^2 + 6000k$

The _____ value of _____ is _____ when _____ is _____.

h) $m = 250n^2 - 1750n + 800$

The _____ value of _____ is _____ when _____ is _____.

i) $w = -5000v^2 - 1000000v - 2000000$

The _____ value of _____ is _____ when _____ is _____.