

Calculating with Upper and Lower Bounds

Given that a is 40 to the nearest 10 and b is 8 correct to the nearest integer:	Given that e is 20 correct to the nearest five and f is 2.5 correct to 1 decimal place:	Given that p is 200 to 1 significant figure and q is 25 to 2 significant figures:	Given that x is 3 to the nearest integer, y is 1.5 to the nearest tenth and z is 12 to 2 significant figures:
(a)	(d)	(g)	(j)
Find the upper and lower bounds of $10a$ $LB = 350$ $UB = 450$	Find the upper and lower bounds of $e - f$ $LB = 14.95$ $UB = 20.05$	Find the upper and lower bounds of \sqrt{p} $LB = 12.247449$ $UB = 15.811388$	Find the upper and lower bounds of $2(x + z - y)$ $LB = 24.9$ $UB = 29.1$
(b)	(e)	(h)	(k)
Find the upper and lower bounds of $a + b$ $LB = 42.5$ $UB = 53.5$	Find the upper and lower bounds of $\frac{e}{f}$ $LB = 6.862745$ $UB = 9.183673$	Find the upper and lower bounds of $\frac{1000}{pq}$ $LB = 0.156863$ $UB = 0.272109$	Find the upper and lower bounds of $\frac{z}{x-y}$ $LB = 7.419355$ $UB = 13.157895$
(c)	(f)	(i)	(l)
Find the upper and lower bounds of $a \times b$ $LB = 262.5$ $UB = 382.5$	Find the upper and lower bounds of e^2 $LB = 306.25$ $UB = 506.25$	Find the upper and lower bounds of $\sqrt{\frac{1}{p-q}}$ $LB = 0.066593$ $UB = 0.089622$	Find the upper and lower bounds of $z - x \times 2^y$ $LB = 1.251400$ $UB = 5.669799$