Estimating Calculations

Question	Values Rounded to 1 sf			Calculation	Estimated Answer	Overestimate or Underestimate?	Actual Answer
$3.3 \times 2194 \times 1.2$	3.3	2194	1.2	$3 \times 2000 \times 1$	6000	*Underestimate*	8688.24
	3	2000	1				
$\frac{17.8 + 67.3}{12.29}$	17.8	67.3	12.29	$\frac{20 + 70}{10}$	9	*Overestimate*	6.92
	20	70	10				
$\frac{47 \times 78.6}{0.53}$	47	78.6	0.53	$\frac{50 \times 80}{0.5}$	8000	*Overestimate*	6970.19
	50	80	0.5				
$\frac{1.78^3}{62.1 + 43.3}$	1.78	62.1	43.3	$\frac{2^3}{60 + 40}$	0.08	*Overestimate*	0.0535
	2	60	40				
$\frac{\sqrt{103}}{0.98 \times 19}$	103	0.98	19	$\frac{\sqrt{100}}{1 \times 20}$	0.5	*Underestimate*	0.545
	100	1	20				
$\frac{5.34 + 3.296}{0.195}$	5.34	3.296	0.195	$\frac{5 + 3}{0.2}$	40	*Underestimate*	44.29
	5	3	0.2				
$\frac{(4.12 \times 0.53)^2}{\sqrt[3]{7.97}}$	4.12	0.53	7.97	$\frac{(4 \times 0.5)^2}{\sqrt[3]{8}}$	2	*Underestimate*	2.38
	4	0.5	8				