1. Round each value to 1 significant figure. Without using your calculator and by showing all your steps, find an approximate answer to:

$$\frac{827}{2.13 \times 4.99} =$$

(/ 4)

---

2. Write the following numbers in standard form, giving your answer correct to 3 significant figures:

a. $800350 =$

b. $0.000003562 =$

(/ 4)

---

3. Without using your calculator and by showing all your steps, find the value of the following, leaving your answers in standard form.

a. $(91 \times 10^{4}) \div (13 \times 10^{-5}) =$

b. $(3 \times 10^{6}) \times (5 \times 10^{-9}) =$

c. $(7 \times 10^{3}) + (36521 \times 10^{-2}) =$

(/ 9)

4. If $x = 180$ correct to the nearest 10,
$y = 9$ correct to 1 significant figure and
$z = 3.8$ correct to 1 decimal place,

a) Complete the following table:

	Lower Bound	Upper Bound
x		
y		
z		

b) Hence, calculate the following:

i. Lower bound of $(x + y)$,

ii. Lower bound of $(x \times y)$,

iii. Upper bound of $\frac{x}{y}$ .Give your answer correct to 3 significant figures.

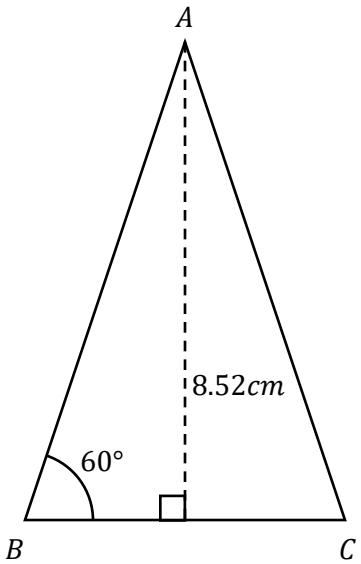
(/ 15)

5. Given that $A = 30 \pm 5$, $B = 80 \pm 5$, find the upper bound of $\frac{B-A}{A}$. Leave your answer as a fraction.

(/ 5)

---

6. Estimate the length of AB in the triangle below if $\sin(60°) = 0.866$



7. Use standard form to calculate the following expressions. Give your answer in standard form.

a) $(3 \times 10^3) \times (5 \times 10^5) =$

b) $(3 \times 10^{-3}) \times (4 \times 10^5) =$

c) $(6 \times 10^8) \div (2 \times 10^5) =$

d) $(3.5 \times 10^{-5}) \div (1.4 \times 10^{-3}) =$

e) $(2.7 \times 10^{-3}) - (6 \times 10^{-5}) =$

8. Use standard form to calculate an estimate for these. Give your answer as an ordinary number correct to 1 s.f

a) $\dfrac{1.4 \times 10^2}{2.8 \times 10^{-5}} =$

b) $\left(\dfrac{2.56 \times 10^{-3}}{6.28 \times 10^{-1}}\right)^3 =$

9. By writing these numbers in standard form correct to 1 s.f. work out an estimate of the following in standard form to 1 s.f.

a) $6004 \times 454 =$

b) $0.0021 \times 65400 =$

c) $0.000045 \times 0.0047 =$

d) $\frac{0.0459}{0.00366} =$