Year 9 Standard Form and Bounds – Foundation

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Answers and worked solutions · 10 questions

A. Standard form and bounds

1. 4.8×10^{-5}

Put the decimal point after the first non-zero digit: 4.8

$0.000048 = 4.8 \times 10^{-5}$

2. 9.7×10^{8}

Put the decimal point after the first non-zero digit: 9.7

$970\,000\,000 = 9.7 \times 10^{8}$

3. 17 000 000

Multiply 1.7 by 10 000 000

= 17 000 000

4. 46 000

Multiply 4.6 by 10 000

= 46 000

5. 7600

$\div 10^{-3}$ means multiply by 1000

= 7600

6. 75 000

$\times 10^{4}$ means multiply by 10 000

= 75 000

7. 730

$\div 10^{-2}$ means multiply by 100

= 730

8. lower bound 5450 m, upper bound 5550 m

Half of 100 is 50

Lower: 5500 − 50 = 5450; upper: 5500 + 50 = 5550

9. 4.8×10^{6}

$6 \times 8 = 48$ and $10^{-2} \times 10^{7} = 10^{5}$

$= 4.8 \times 10^{6}$

10. 2.4×10^{4}; 5.4×10^{4}; 78 000; 3.5×10^{5}

Write them all in standard form and compare the powers of 10 first

Then compare the numbers in front