STANDARD FORM – PRACTICE QUESTIONS

1.
Convert each number from standard form.

(a) 9×10^5

(b) 4.5×10^2

(c) 8.1×10^4

(d) 7.77×10^3

(e) 1.18×10^4

(f) 3.9×10^5

(g) 1.26×10^6

(h) 9.2×10^4

(i) 5.533×10^7

(j) 8×10^5

2.
Convert each number from standard form.

(a) 5×10^{-2}

(b) 7.81×10^{-3}

(c) 1.95×10^{-4}

(d) 5.9×10^{-5}

(e) 6.34×10^{-2}

(f) 7×10^{-6}

(g) 9.234×10^{-3}

(h) 8.01×10^{-4}

(i) 6.5×10^{-6}

(j) 3.31×10^{-2}

3.
Convert each number into standard form.

(a) 2000

(b) 4500

(c) 781000

(d) 660000

(e) 1250000

(f) 9800

(g) 1457000

(h) 90800

(i) 40000000

(j) 72500

(k) 2020

4.
Convert each number into standard form.

(a) 0.03

(b) 0.0065

(c) 0.000015

(d) 0.00456

(e) 0.0235

(f) 0.00000001

(g) 0.00803

(h) 0.0022

(i) 0.0003928

(j) 0.09099

(k) 0.00216

5.
Convert each number from standard form.

(a) 8×10^{4}

(b) 1.12×10^{5}

(c) 8.9×10^{-2}

(d) 7.24×10^{6}

(e) 4.467×10^{-3}

(f) 3×10^{-7}

(g) 9.04×10^{-4}

(h) 7.355×10^{5}

(i) 2.21×10^{-5}

(j) 7.102×10^{3}

(k) 9.9999×10^{8}

6.
Convert each number into standard form.

(a) 0.067

(b) 120000

(c) 9180

(d) 0.00004

(e) 0.02907

(f) 562000000

(g) 0.001111

(h) 0.00000035

(i) 9800000

(j) 0.000455

(k) 67550000

7.
Put these numbers into order, smallest to largest.

6.2×10^{5} 6.3×10^{3} 6.4×10^{-2} 6.5×10^{4}

8.
Put these numbers into order, smallest to largest.

1.55×10^{2} 1.56×10^{3} 1.57×10^{3} 1.58×10^{2}

9.
Put these numbers into order, smallest to largest.

6.14×10^{4} 6.145×10^{5} 6.144×10^{4} 6.4×10^{3}

10.
Put these numbers into order, smallest to largest.

3×10^{-2} 3.1×10^{-3} 3.01×10^{-4} 2.9×10^{-3}

11.
Put these numbers into order, smallest to largest.

1.11×10^{6} 1.01×10^{5} 1.001×10^{6} 1.1×10^{4}

12.
Put these numbers into order, smallest to largest.

5.5×10^{-1} 56×10^{-3} 55.6×10^{-2} 560×10^{-5}

13.
Put these numbers into order, smallest to largest.

0.7×10^{6} 7.1×10^{5} 705×10^{3} 71.2×10^{3}

14.
Put these numbers into order, smallest to largest.

9.09×10^{-6} 908×10^{-7} 91×10^{-6} 9.009×10^{-6}

15.
Put these numbers into order, smallest to largest.

7156×10^{-2} 0.0071×10^{5} 7.16×10^{2} 0.761×10^{3}

16.
Put these numbers into order, smallest to largest.

0.0004×10^{8} 4001×10^{-2} 0.41×10^{4} 410000×10^{-5}

17.
Work out $(6.5 \times 10^5) + (2 \times 10^4)$.
Give your answer in standard form.

18.
Work out $(9.01 \times 10^5) + (6 \times 10^3)$.
Give your answer in standard form.

19.
Work out $(4.3 \times 10^7) - (6 \times 10^5)$.
Give your answer in standard form.

20.
Work out $(8.2 \times 10^5) + (4.714 \times 10^7)$.
Give your answer in standard form.

21.
Work out $(5.75 \times 10^9) - (4 \times 10^6)$.
Give your answer in standard form.

22.
Work out $(3 \times 10^3) \times (2 \times 10^4)$.
Give your answer in standard form.

23.
Work out $(8 \times 10^7) \div (4 \times 10^5)$.
Give your answer in standard form.

24.
Work out $(9 \times 10^3) \times (2 \times 10^3)$.
Give your answer in standard form.

25.
Work out $(3 \times 10^{10}) \div (4 \times 10^3)$.
Give your answer in standard form.

26.
Work out $(4 \times 10^{10}) \div (5 \times 10^3)$.
Give your answer in standard form.

27.
A floppy disk can store 1,600,000 bytes of data.
Steve needs to store 4.8×10^7 bytes of data.

How many floppy disks would Steve need to store the data?

28.
The surface area of Earth is 4.95×10^8 km^2.
The surface area of Mars is 6.7×10^6 km^2.

What is the difference in surface area between Earth and Mars? Give your answer in standard form.

29.
The thickness of a piece of paper is 1.25×10^{-4} metres.
5×10^5 pieces of paper are piled on top of each other.

How tall is the pile of paper? Give your answer in centimetres.

30.
A snail moves at a speed of 8×10^{-3} metres per second.

How many seconds would it take the snail to travel 200 metres?