The National
Orthodox School
Shmaisani

المدرسة
الوطنية الأرثوذكسية
الشميساني

Worksheet 5 |

Lower Secondary
Stage (6-8)

1st Semester | 2023-2024

Subject: Math   **Chapter:** 3
Objectives:
  • To write large and small numbers using standard form
  • To calculate using standard form

Q1:   **a)** Write the number 230 000 in standard form.
          b) Write 6.3×10^{-3} as an ordinary number.

Q2:   **a)** Write the number 0.000 47 in standard form.
          b) Write 3.7×10^6 as an ordinary number.
          c) Work out the value of $\dfrac{5 \times 10^3}{8 \times 10^{-5}}$
          Give your answer in standard form.

Q3:   Work out the value of $(6 \times 10^5) \times (8 \times 10^{-4})$.
          Give your answer in standard form.

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Q4: The distance between Mercury and the Sun is 58 000 000 km.
a) Write the number 58 000 000 in standard form.

Uranus is 50 times as far from the Sun as Mercury.
b) Calculate the distance between Uranus and the Sun.
    Give your answer in standard form.

Q5: Work out the value of $(7.2 \times 10^4) + (4.7 \times 10^3)$.
    Give your answer in standard form.

Q6: The age of the Universe is approximately 15 000 million years.
a) Write the number 15 000 million in standard form.

1 gigayear $= 10^9$ years.
b) Express the age of the Universe in gigayears.

Q7: $x = 2 \times 10^m$ and $y = 3 \times 10^n$ where m and n are integers.
Find an expression, in standard form, for xy.

Q8: $P = 2a + 5b$
$a = 3.5 \times 10^6$ and $b = 2.7 \times 10^7$
Work out the value of P.
Give your answer in standard form.

Q9: $y = \dfrac{a+b}{ab}$
$a = 2 \times 10^4$ and $b = 8 \times 10^5$
Work out the value of y.
Give your answer in standard form correct to 3 significant figures.

Q10: $F = 3p - 4q$
$p = 2 \times 10^{-5}$ and $q = 8 \times 10^{-6}$
Work out the value of F.
Give your answer in standard form.

Q11: $3.2 \times 10^8 + a \times 10^7 = 3.8 \times 10^8$
Find the value of a.

Q12: $x = 7 \times 10^n$ where n is an integer.
Find an expression, in standard form, for x^2
Give your expression as simply as possible.