

Nom : \_\_\_\_\_

PHYS 11



Mock  
Exam

Préfixes, notation scientifique,  
inversion de formules

|   |  |  |   |  |  |   |      |     |          |    |     |   |  |  |       |  |  |   |
|---|--|--|---|--|--|---|------|-----|----------|----|-----|---|--|--|-------|--|--|---|
| G |  |  | M |  |  | k | h    | da  | <b>1</b> | d  | c   | m |  |  | $\mu$ |  |  | n |
|   |  |  |   |  |  |   | 0.01 | 0.1 | 1        | 10 | 100 |   |  |  |       |  |  |   |

$\div 10$        $\cdot 10$

**Exercice 1 (14 points)** Transformer dans l'unité demandée :

|                   |                              |                   |                              |
|-------------------|------------------------------|-------------------|------------------------------|
| a) 3 500 mm =     | <input type="text"/> hm      | h) 840 ms =       | <input type="text"/> ks      |
| b) 0.02 m =       | <input type="text"/> $\mu$ m | i) 45 hs =        | <input type="text"/> Gs      |
| c) 3 400 km =     | <input type="text"/> Gm      | j) 45.6 $\mu$ g = | <input type="text"/> hg      |
| d) 3 ng =         | <input type="text"/> g       | k) 30 ng =        | <input type="text"/> g       |
| e) 4.56 $\mu$ g = | <input type="text"/> hg      | l) 340 km =       | <input type="text"/> Gm      |
| f) 450 hs =       | <input type="text"/> Gs      | m) 0.002 m =      | <input type="text"/> $\mu$ m |
| g) 8.4 ms =       | <input type="text"/> ks      | n) 370 mm =       | <input type="text"/> hm      |

**Exercice 2 (6 points)** Écrire les nombres suivants en notation scientifique :

|               |                      |                 |                      |
|---------------|----------------------|-----------------|----------------------|
| a) 7 400 =    | <input type="text"/> | d) 1 =          | <input type="text"/> |
| b) 0.00006 =  | <input type="text"/> | e) 97,3 % =     | <input type="text"/> |
| c) -155 000 = | <input type="text"/> | f) 2 millions = | <input type="text"/> |

**Exercice 3** (10 points + 1 bonus) Inverser la formule de gauche pour trouver la grandeur de droite :

a)

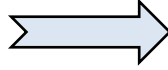
$$v = \frac{d}{t}$$



$$t =$$

b)

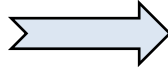
$$W = P \cdot t$$



$$P =$$

c)

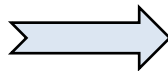
$$E_{pot} = mgh$$



$$h =$$

d)

$$R = R_1 + R_2$$



$$R_2 =$$

e)

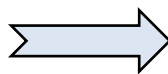
$$\bar{v} = \frac{v_f - v_i}{2}$$



$$v_i =$$

f)

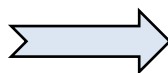
$$x = \frac{1}{2}at^2 + v_0t + x_0$$



$$a =$$

g)

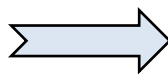
$$F = G \cdot \frac{M \cdot m}{d^2}$$



$$d =$$

h)

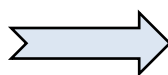
$$E = \frac{1}{2}mv^2 + mgh$$



$$m =$$

i)

$$R = \frac{R_1 \cdot R_2}{R_1 + R_2}$$



$$R_2 =$$

j)

$$P = \sigma T^4$$

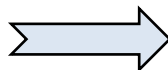


$$T =$$

k)

$$x = \frac{1}{2}at^2 + v_0t + x_0$$

BONUS !



$$t =$$