Lycee Des Arts
Hadat: Rue jamous

Grade / La note

Name / nom:
Test in/Examen de: 3rd - Trial. Mathematics. Class / Classe: 9th Grade
Time / La durée : Date / date: (2016-2017)
Correction-Standards.

1st-exercise:

1) To find a & b we solve the system (S):

$$\begin{cases} (2a-3b=-14\sqrt{2}) \times (2) & \dots (1) \\ (3a+2b=18\sqrt{2}) \times (3) & \dots (2) \end{cases}$$

$$\begin{cases} 4a-6b=-28\sqrt{2} \\ 9a+6b=54\sqrt{2} \end{cases} \text{ add}$$

$13a = 26\sqrt{2}$.

$\boxed{a=2\sqrt{2}}$

replace value of a in eqn (2)

$3a+2b=18\sqrt{2}$.

$6\sqrt{2}+2b=18\sqrt{2}$

$\boxed{b=6\sqrt{2}}$

now table (I) is a proportionality table, if:

$$\frac{\frac{a}{3}}{3+2\sqrt{2}} \overset{?}{=} \frac{3-2\sqrt{2}}{\frac{b}{8}}$$

or $\frac{a}{3} \times \frac{b}{8} \overset{?}{=} (3+2\sqrt{2})(3-2\sqrt{2})$

$\frac{2\sqrt{2}}{3} \times \frac{6\sqrt{2}}{8} \overset{?}{=} (3)^2 - (2\sqrt{2})^2$

$1 = 1$ ✓.

Thus, True.

2) Since downloading occured successively then it is case of double decrease & we apply product principle

Thus, percentage of un-loaded file $= \left(1-\frac{10}{100}\right) \times \left(1-\frac{20}{100}\right) \times 100$

$= 72\%$. False.

3) In ΔABC we have:

$$AB = \frac{4^{1005} - 4^{1003}}{5 \times 4^{1003}}$$

$$= \frac{4^{1003}(4^2-1)}{5 \times 4^{1003}}$$

$$= \frac{15}{5}$$

$AB = 3$ units

$$Ac = \frac{\sqrt{21} \times 10^{-12} \times \sqrt{65}^{21}}{21\sqrt{5} \times 10^{-13}} - \sqrt{16}$$

$$= \frac{\sqrt{21}^2 \times 10}{21} - 4$$

$= 10 - 4$

$Ac = 6$ units