Lycée qualifiant Tariq Ben Zyad Niveau : 2BACSHF	❖ DEVOIR SURVEILLÉ N° 1 ❖ Semestre 2 – ZipGrade A	Professeur : Bouyguir Taher www.proftaher.com

Nom et prénom : ..... Numéro : .....

Exercice 1 : QCM – questions 1 à 10

On considère $f(x) = x^2 + 1$. Cocher la ou les réponses correctes.

1. D_f :

☐ A. $]-\infty;+\infty[$ ☐ B. $]-1;1]$ ☐ C. $[1;+\infty[$ ☐ D. $]-\infty;1]$

2. $f(1)$:

☐ A. 2 ☐ B. 3 ☐ C. 1 ☐ D. 0

3. $f(2)$:

☐ A. 5 ☐ B. 2 ☐ C. 3 ☐ D. 4

4. $f(-1)$:

☐ A. 2 ☐ B. 0 ☐ C. -2 ☐ D. -1

5. $\lim\limits_{x\to+\infty} f(x)$:

☐ A. $+\infty$ ☐ B. 1 ☐ C. $-\infty$ ☐ D. 0

6. $\lim\limits_{x\to-\infty} f(x)$:

☐ A. $+\infty$ ☐ B. 1 ☐ C. 0 ☐ D. $-\infty$

7. $f'(x)$:

☐ A. $2x$ ☐ B. $2x+1$ ☐ C. $x+1$ ☐ D. $2x-1$

8. $f'(0)$:

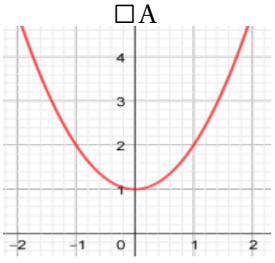
☐ A. 0 ☐ B. 1 ☐ C. -1 ☐ D. 3

9. Tangente en 0

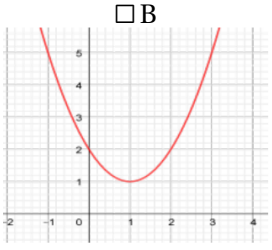
☐ A. $y = 1$ ☐ B. $x = 0$ ☐ C. $y = 2x$ ☐ D. $y = 2x+1$

10. La courbe représentative de f est :

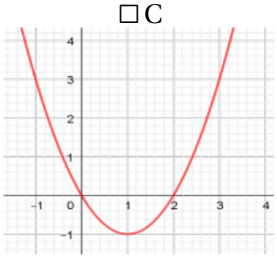
☐ A



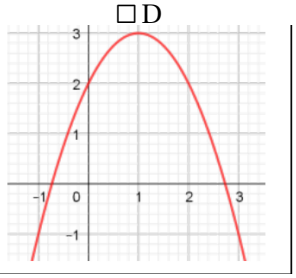
☐ B



☐ C



☐ D



Exercice 2 : QCM – questions 11 à 20

On considère $g(x) = \sqrt{2x+2}$. Cocher la ou les réponses correctes.

11. D_g :

☐ A. $[2;+\infty[$ ☐ B. $[-2;+\infty[$ ☐ C. $[1;+\infty[$ ☐ D. $[-1;+\infty[$

12. $g(1)$:

☐ A. 4 ☐ B. 2 ☐ C. $\sqrt{2}$ ☐ D. -2

13. $g(-1)$:

☐ A. 2 ☐ B. 0 ☐ C. -2 ☐ D. $\sqrt{2}$

14. $g(\frac{7}{2})$:

☐ A. $\sqrt{\frac{9}{2}}$ ☐ B. $\frac{1}{2}$ ☐ C. 3 ☐ D. $\sqrt{\frac{16}{2}}$

15. $\lim\limits_{x\to+\infty} g(x)$:

☐ A. $+\infty$ ☐ B. $-\infty$ ☐ C. 0 ☐ D. 2

16. $\lim\limits_{x\to-1^+} g(x)$:

☐ A. $+\infty$ ☐ B. 0 ☐ C. 2 ☐ D. $-\infty$

17. $g'(x)$:

☐ A. $\frac{1}{\sqrt{2x+2}}$ ☐ B. $\frac{1}{2\sqrt{2x+2}}$ ☐ C. $\frac{2}{\sqrt{2x+2}}$ ☐ D. $\frac{4}{\sqrt{2x+2}}$

18. Dérivabilité en -1

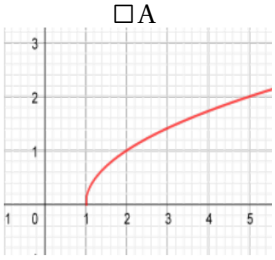
☐ A. $g'(-1) = -1$ ☐ B. $g'(-1) = \frac{1}{2}$ ☐ C. Non dérivable en -1. ☐ D. $g'(-1) = 0$

19. Solution de $2x+2=0$

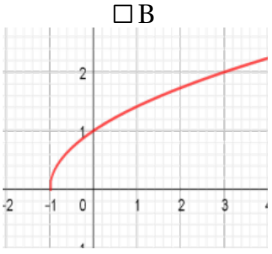
☐ A. 1 ☐ B. -1 ☐ C. 0 ☐ D. -4

20. La courbe représentative de g est :

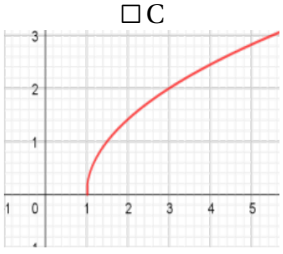
☐ A



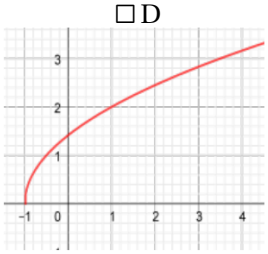
☐ B



☐ C



☐ D



Bon courage! ☺