



Student No.:	Date: / /	Score:
Student Name:		/18

Revision of Quadratic Equations in One Unknown (I)

Exercises

1. Solve the quadratic equation $2x^2 - 5x + 3 = 0$.

2. Solve the quadratic equation $3x^2 - x + 1 = 0$.

3. Form a quadratic equation in x whose roots are 3 and $-\frac{1}{2}$.

4. The product of two consecutive positive odd numbers is 195, find the numbers.

S4E-17A

5. It is given that $-5x^2 + x - k = 0$ has no real roots, find the range of the values of k .

6. It is known that -4 is a root of the quadratic equation $3x^2 - 11x - k = 0$.

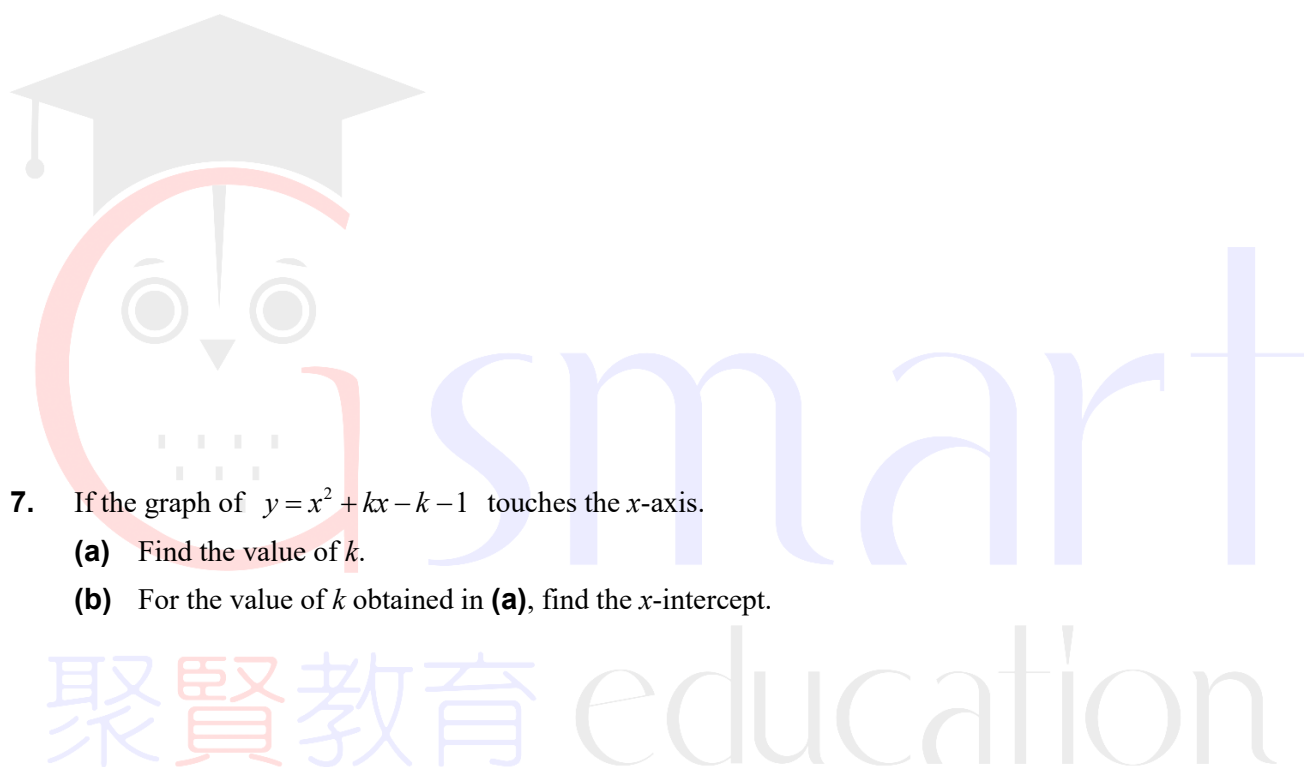
(a) Find the value of k .

(b) Hence, find the other root of the quadratic equation.

7. If the graph of $y = x^2 + kx - k - 1$ touches the x -axis.

(a) Find the value of k .

(b) For the value of k obtained in (a), find the x -intercept.



8. Given that α and β are roots of the equation $2x^2 - 4x + 9 = 0$.
- (a) Find the value of $\alpha + \beta$ and $\alpha\beta$.
- (b) Find the values of $\frac{1}{\alpha} + \frac{1}{\beta}$ and $\frac{1}{\alpha\beta}$.
- (c) Form a quadratic equation in x whose roots are $\frac{1}{\alpha}$ and $\frac{1}{\beta}$.

9. If α and β are roots of the equation $x^2 - (k+1)x + 12 = 0$ and $\alpha^2 + \beta^2 = 25$, find the possible values of k .

S4E-17A

10. The total surface area of a cone is $40\pi \text{ cm}^2$ and its slant height is 6 cm, find the base radius of the cone.

M.C.

1. Solve the equation $2(x-3) = x(x-3)$.

A. $x = 2$

B. $x = 3$

C. $x = 2$ or $x = 3$

D. $x = 1$ or $x = 3$

2. If $\begin{cases} \alpha^2 + 3\alpha = 2 \\ \beta^2 + 3\beta = 2 \end{cases}$, then $\alpha^2 + \beta^2 =$

A. 13.

B. 5.

C. -5.

D. -13.

3. If the quadratic equation $x^2 - 6x + k = 2$ has equal roots, then $k =$

A. -9.

B. 9.

C. -11.

D. 11.

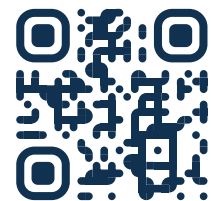
4. If α and β are roots of the equation $x^2 - 4x + m = 0$, then $\alpha^2 + 4\beta =$

A. $-16 - m$.

B. $-16 + m$.

C. $16 - m$.

D. $16 + m$.



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