

Answer The Following

- 1) If $x^2 + kx + 30 = (x - 5)(x - 6)$, find the value of k .
- 2) If $f(x) = 8x + 9$, find the inverse of f , f^{-1} .
- 3) Find sum of zeros of polynomial $x^2 + 81$.
- 4) If $f(x) = -4x^2 + 4\sqrt{2}x - 3$, find the value of $f(\sqrt{2})$.
- 5) If $\frac{x}{5} + \frac{y}{8} = 1 (x, y \neq 0)$, find value of $x^2 + y^2$.

Choose correct answer(s) from given choice

- 6) If $f(x) = ax^2 + bx + c$, and $f(1) = 4$ and $f(-1) = 3$, then find the value of $a + c$.

a. 4	b. 4.5
c. 5	d. 3.5
- 7) If $x^2 + 70$ is divided by $(x - 1)$, find the remainder.

a. 69	b. 71
c. 70	d. 8

Fill in the blanks

- 8) If $2x^4 + x^3 + x^2 + 2x + 21$ is divided by $x + 2$, the remainder = .
- 9) If $(x - 1)$ is a factor of $2x^4 + kx^3 + 2x^2$, the value of $k =$.

Check True/False

- 10) $(x - 2)$ is a factor of $x^2 - x + 3$.
 True False

Answers

1) -11

2) $f^{-1}(x) = \frac{x - 9}{8}$