



Unknown Variable

Name _____

Score _____

DP:25

- 1) Find the value of k that makes the expression $x^2 - kx + 12$ divisible by $x - 4$.

- 2) Find the value of m that makes the expression $6p^3 + p^2 - mp - 6$ divisible by $2p + 1$.

- 3) Find the value of t that makes the expression $y^5 - y^4 + 4y^2 + y + t$ divisible by $y - 1$.

- 4) Find the value of n that makes the expression $nd^2 - 41d + 20$ divisible by $5d - 4$.

- 5) Find the value of x that makes the expression $g^4 - g^3 - 10g^2 + g + 14$ divisible by $g + 2$.



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Answer key

DP:25

- 1) Find the value of k that makes the expression $x^2 - kx + 12$ divisible by $x - 4$.

$$\underline{\hspace{10em}} \quad \mathbf{k = 7}$$

- 2) Find the value of m that makes the expression $6p^3 + p^2 - mp - 6$ divisible by $2p + 1$.

$$\underline{\hspace{10em}} \quad \mathbf{m = 13}$$

- 3) Find the value of t that makes the expression $y^5 - y^4 + 4y^2 + y + t$ divisible by $y - 1$.

$$\underline{\hspace{10em}} \quad \mathbf{t = -5}$$

- 4) Find the value of n that makes the expression $nd^2 - 41d + 20$ divisible by $5d - 4$.

$$\underline{\hspace{10em}} \quad \mathbf{n = 20}$$

- 5) Find the value of x that makes the expression $g^4 - g^3 - 10g^2 + g + 14$ divisible by $g + 2$.

$$\underline{\hspace{10em}} \quad \mathbf{g = -1}$$