

$$\lim_{x \rightarrow 20} 12 = 12$$

$$\lim_{x \rightarrow -2} (3x+5)(2x) = (3(-2)+5)(2(-2)) = (-6+5)(-4) \\ = (-1)(-4) = 4$$

$$\lim_{x \rightarrow -8} (5x^3 + 3x^2 + x + 7)(x^2 + 10) = (5(-8)^3 + 3(-8)^2 + (-8) + 7)((-8)^2 + 10) \\ = (-2560 + 192 - 8 + 7)(74) = (-2369)(74) = -175,232$$

$$\lim_{x \rightarrow 7} (3x+5) = (3(7)+5) = (21+5) = 26$$

$$(5(-8)^3 + 3(-8)^2 + (-8) + 7)((-8)^2 + 10)$$

$$(5(-512) + 3(64) + (-8) + 7)(64 + 10)$$

$$(-2560 + 192 - 8 + 7)(74)$$

$$(-2369)(74)$$

$$(-2369)(74)$$

$$175,306$$

$$\text{dim } (2x^2 - 5x + 3)_{x=5} = 2 \times (5)^2 - 5(5) + 3 = 2(25) - 25 + 3 = 25 - 25 + 3 = 3$$

$$\text{dim } (x^3 - 2x^2 + x + 7)_{x=3} = 3^3 - 2(3)^2 + 3 + 7 = 27 - 2(9) + 3 + 7 = 27 - 18 + 10 = 19$$

$$\text{dim } (3x^3 + 5x^2 + 2x + 10)_{x=5} = 3(5^3) + 5(5^2) + 2(5) + 10 = 375 + 125 + 10 + 10 = 520$$

$$\text{dim } (10x^3 + 5x^2 - x + 7)_{x=10} = 10(10^3) + 5(10^2) - 10 + 7 = 10,000 + 500 - 10 + 7 = 10,497$$

$$\text{dim } (-5x^3 - 3x^2 + 2x - 8)_{x=1} = -5(1)^3 - 3(1)^2 + 2(1) - 8 = -5 - 3 + 2 - 8 = -14$$

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