

Questions?

$$a^3 + b^3 = (a+b)(a^2 - ab + b^2)$$

$$\frac{5c}{6} \quad 5c) \quad (x-3)^3 + (3x-2)^3$$

$$= ((x-3) + (3x-2))((x-3)^2 - (x-3)(3x-2) + (3x-2)^2)$$

$$= (x-3+3x-2)(x^2-6x+9 - (3x^2-11x+6) + (9x^2-12x+4))$$

$$= (4x-5)(7x^2-7x+7)$$

$$= 7(4x-5)(x^2-x+1)$$

$$6) \quad \frac{\underbrace{(a+b)(a^2-ab+b^2)}_{a^3+b^3} + \underbrace{(a-b)(a^2+ab+b^2)}_{a^3-b^3}}{2a^3}$$

$$= \frac{a^3+b^3 + (a^3-b^3)}{2a^3}$$

$$= \frac{2a^3}{2a^3}$$

$$= 1$$

\therefore yes Jarred is correct!

$$\frac{(3x+2)(9x^2-6x+4) + (3x-2)(9x^2+6x+4)}{2(3x)^3}$$

$$= \frac{\left((3x)^3 + 2^3 \right) + \left((3x)^3 - (2)^3 \right)}{2(3x)^3}$$

Topics

- properties of polynomial functions
 - # turning points
 - # zeros
 - end behaviours
- transformations of the form
$$f(x) = a(k(x-d))^n + c$$
- graphing using the zeros in factored form
- factor polynomials
- polynomial division
- factor theorem
- remainder theorem

Homework:

pg. 122 #1d, 2
pg. 184-185 #13 to 18

pg. 186

Chapter Self-Test (60 minutes)

Questions 2 and 9: would be worth several marks each on a test.

Questions 4 and 6: an explanation is required as well.

Question #3a has an incorrect answer. It should be: $(x-9)(x+8)(2x+1)$

