

Honors Math 3

Unit 3 – Day 6 Homework

Please do your work on a separate sheet of paper. You must show ALL work and attempt ALL problems to receive full credit. Please check your answers BEFORE class!

P. 366 #7-17 ODD, 31, 33

Divide.

$$7. \frac{x^3 - x^2 - 10x + 10}{x - 3} = x^2 + 2x - 4 + \frac{-2}{x-3}$$

$$9. \frac{2s^3 - 29s + 13}{s + 4} = 2s^2 - 8s + 3 + \frac{1}{s+4}$$

$$11. \frac{6t^3 + t^2 + 7t + 10}{3t + 2} = 2t^2 - t + 3 + \frac{4}{3t+2}$$

$$13. \frac{15z^3 - z^2 - 11z - 3}{3z^2 - 2z - 1} = 5z + 3$$

$$15. \frac{6x^4 - 3x^3 + 5x^2 + 2x - 6}{3x^2 - 2} = 2x^2 - x + 3$$

$$17. \frac{9u^4 + 6u^3 + 4u + 4}{3u^2 + 2u + 2} = 3u^2 - 2 + \frac{8u + 8}{3u^2 + 2u + 2}$$

31. Find k so that when $x^3 + kx^2 - kx + 1$ is divided by $x - 2$, the remainder is 0.

$$k = -\frac{9}{2}$$

33. When $3x^2 - 5x + c$ is divided by $x + k$, the quotient is $3x + 1$ and the remainder is 3. Find c and k .

$$c = 1$$

$$k = -2$$