- $x = 3x + 1$ Linear - line
- $x^2 + y^2 =$ Circle
- $y = x^2 + 2x + 1$ Quadratic / parabola
- $y = x^3$ Cubic

Integers - a whole number

Rational number a/b where a and b are integers

Ex 1

Convert to a fraction

$1.10 = \frac{10}{100} = \frac{1}{10} = \frac{11}{10}$

$x^4 + 2x^3 + x^2$ GCF = x^2 - common factor

$x^2\left(\frac{x^4}{x^2} + \frac{2x^3}{x^2} + \frac{x^2}{x^2}\right)$

$x^2(x^2 + 2x + 1$

$x^2(x^2 + x + x + 1)$ $x^2[x(x+1) + 1(x+1)] = x^2(x+2)[x+1] =$

note: General Form of Quadratic equation $x^2(x+1)^2$

$y = ax^2 + bx + c$

product = $a \cdot c$

Sum = b

$\frac{12}{100} = \frac{x}{57{,}000}$ $100x = (57{,}000)(12)$

$100x = (57{,}000)(10+2)$

$100x = 57{,}000 + 114{,}000$

$100x = 684{,}000$

$x = 6{,}840$

Week 11 [illegible]

Ex. 5 Find the inverse

$y = F(x) = 2x + 3$

y is a function of x = $y = f(x)$

$y = 2x + 3$

$x = 2y + 3$

$-3 \quad -3$

$\frac{x-3}{2} = \frac{2y}{2}$

$y = \frac{x-3}{2} = \frac{1}{2}(x-3) \qquad f^{-1}(x) = \frac{1}{2}(x-3)$

Week 13

Ex 6. Exponential and Log

$y = e^x$

$y = \log x$

$y = \ln x = \log_e x$