

### Answer on Question #48754 – Math - Algebra

1. how to solve  $20^x / 10^{2^y}$ ?
2.  $\frac{2}{5}(x+1) - \frac{1}{3}(2x-3) = \frac{1}{15}(21-4x)$
3.  $(x+3)(x-P) \equiv x^2 + Qx - 6$  how to find out the value of P and Q?

#### Solution.

$$1) \frac{20^x}{10^{2^y}} = 2^x 10^{x-2^y}$$

$$2) \frac{2}{5}(x+1) - \frac{1}{3}(2x-3) = \frac{1}{15}(21-4x) \rightarrow$$

$$\left(\frac{2}{5} - \frac{2}{3} + \frac{4}{15}\right)x = \frac{21}{15} - \frac{2}{3} - 1 \rightarrow 0x = -\frac{4}{15} \text{ - no solution}$$

$$3) (x+3)(x-P) \equiv x^2 - Qx - 6 \rightarrow$$

$$\rightarrow x^2 + 3x - Px - 3P = x^2 - Qx - 6 \rightarrow$$

$$(3-P) = -Q, \quad -3P = -6 \rightarrow$$

$$\rightarrow Q = P - 3, \quad 3P = 6 \rightarrow P = 2, \quad Q = -1.$$