

Practice Exam #1

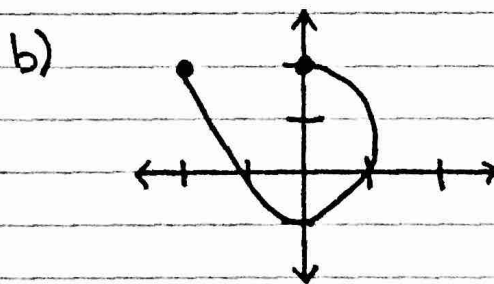
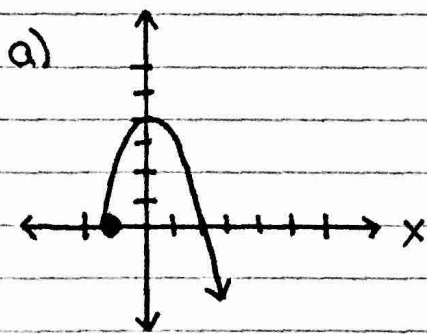
① Solve for x :

$$4(2x-3) + 2x = 8x - 24$$

② What is the equation of a line that passes through the points $(-1, 4)$ & $(2, -8)$

③ Simplify: $(3x^2 + 2x - 1)(2x - 4)$

④ Given each graph state if it is a function & then find the domain & range.



⑤ Simplify: $f(x+2)$ for the function
 $f(x) = 3x^2 - 4x + 1$

Factor each expression completely:

⑥ $x^2 + 4x - 32 =$

⑦ $6v^3 - 16v^2 + 21v - 56 =$

⑧ $4x^2 - 81 =$

⑨ $2x^3 + 54 =$

⑩ $8x^2 + 6x - 9 =$

⑪ $3x^3 - 36x^2 + 81x =$

Solve the equations for x :

⑫ $x^2 + 9x + 18 = 0$

⑬ $15x^2 - 3x = 3 - 7x$

⑭ $9x^2 + 4x - 8 = 4x + 8$

⑮ Factor out the GCF: $16x^5y^3 - 12x^4y^2 + 24x^3y^4$