PS 3 ke

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

$$(2x)^3 - (3)^3 = \boxed{(2x-3)(4x^2 + 6x + 9)}\quad\checkmark$$

② $\dfrac{\left(6 + \dfrac{1}{3}\right)9}{\left(3 - \dfrac{2}{9}\right)9}$ $\dfrac{54+3}{27-2} = \dfrac{48}{25}\quad\boxed{\dfrac{57}{25}}$

③ $F(4) = \dfrac{3}{1}$ $F(0) = -\dfrac{3}{5}$ $\dfrac{-3 + \dfrac{2}{5}}{4}$ $\dfrac{-\dfrac{15}{5} + \dfrac{3}{5}}{4}$

$-\dfrac{12}{5} \cdot \dfrac{1}{4} = \boxed{\dfrac{-3}{5}}$

④ $6\left[-6x - 2 + 2(x+1)\right] = 3x - 2$

$\cancel{\$}\, 6\left\{-6x-2 + 2x + 2\right\} = 3x - 2$

$6\left[-4x\right] = 3x - 2$

$-24x = 3x - 2$

$+2 = 27x$

$\boxed{x = \dfrac{2}{27}}$

⑤ $y = 3x - 3$ $(x+2)^2 = x^2 + 4$

$2x + y = 7$ $2x + 2x - 3 = 7$

$y = 3(0) - 3$ $5x - 3 = 7$

$5x = 10$

3 $x = 2$

(23) ck $4 + 3 = 7$ ✓

⑥ $(8, -4)(0, -4)$

~~$(8, 0)$~~ $\dfrac{-4 + 4}{0 - 8} = \dfrac{5}{-8}$

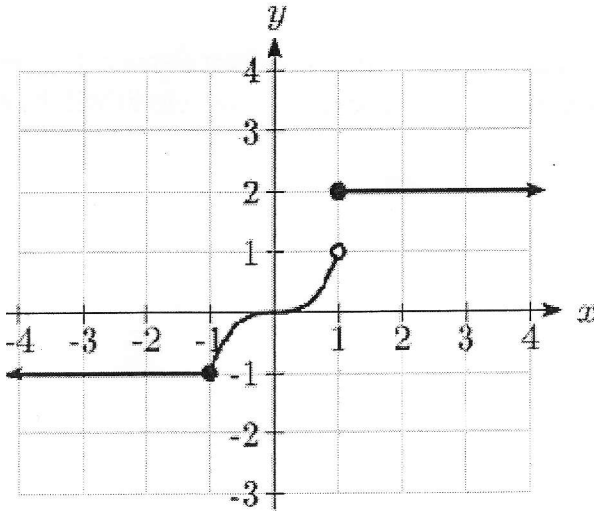$y + 4 = -\dfrac{5}{8}x$ or $y + 4 = -\dfrac{5}{8}(x - 8)$

⑦ $x - 4$ $f(0) = -4$

$7 - x$ $f(10) = -3$

Write a piece–wise defined function to represent the graph below. Make sure to include the domain limitations..

$-1 \qquad (\text{on} -\infty, -1]$

$x^3 \qquad (-1, 1)$

$2 \qquad [1, \infty)$

8)

Solve.

9) Sales of frozen pizza for a club fund–raiser decreased from 850 one year to 635 the next year. What was the percent of change?

$$\frac{635 - 850}{850} \times 100$$

$$-25.3\%$$

10) $\dfrac{3}{x} + \dfrac{3}{4} = 1$

$$4y\left(\frac{3}{x} + \frac{3}{4}\right) = 1(4y$$

$$12 + 3x = 4y$$

$$12 = x$$

2