

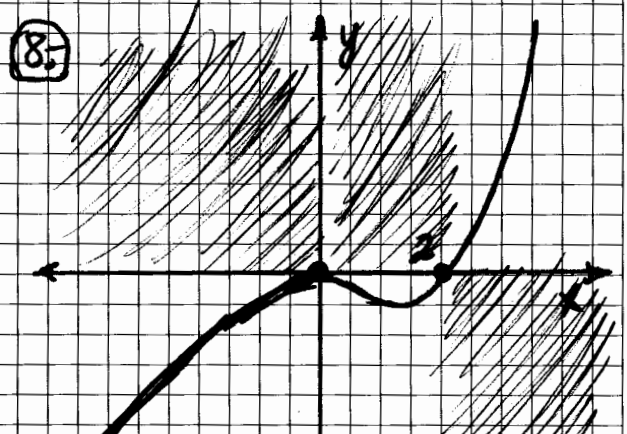
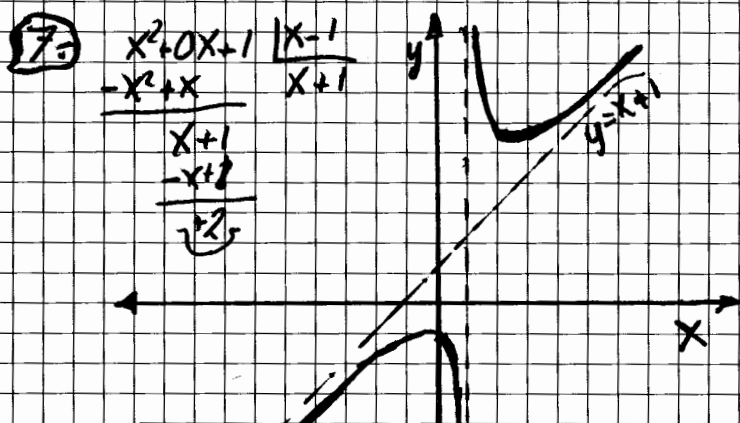
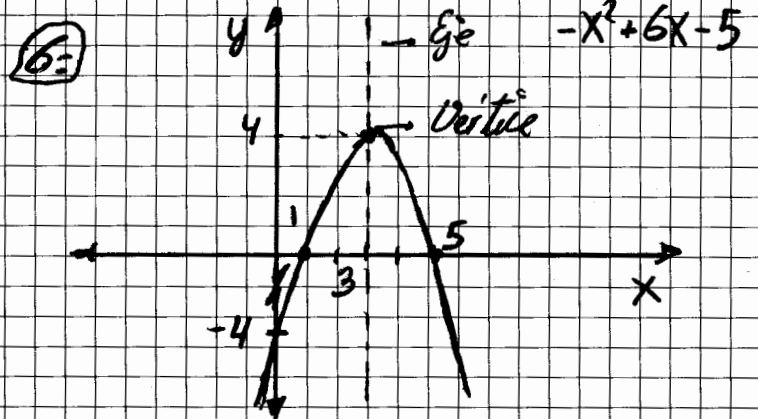
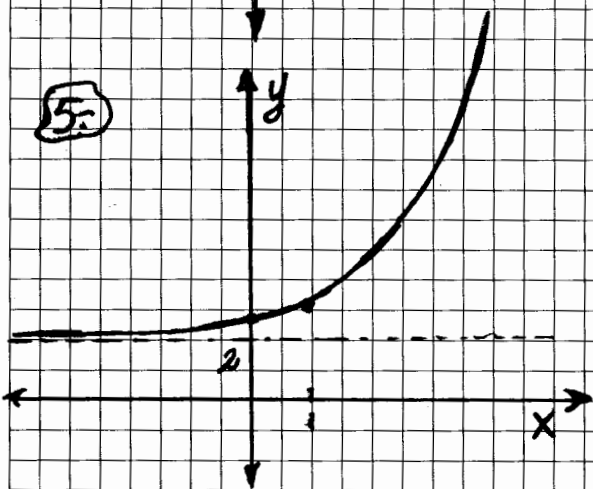
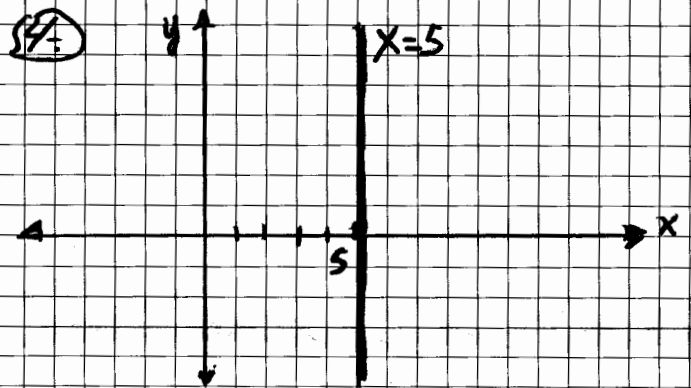
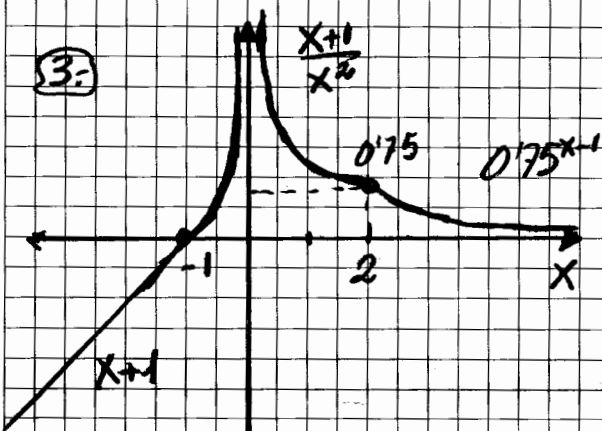
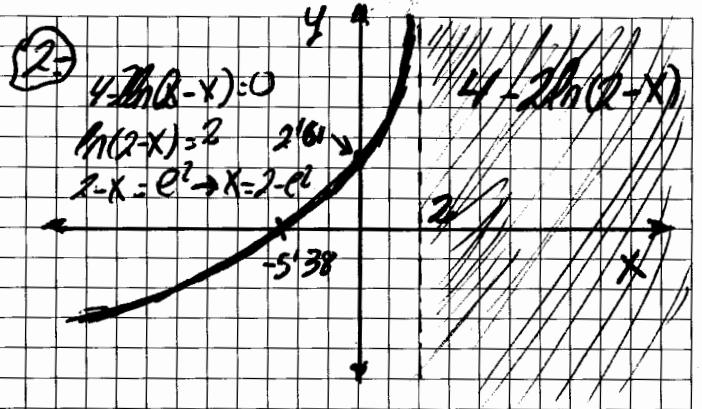
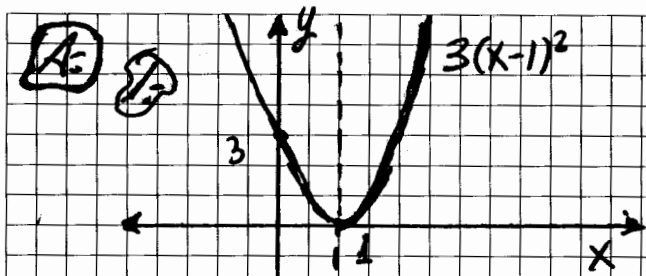


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bilingual school

APELLIDOS Y NOMBRE: Corrección Examen de Evaluación

CURSO: 1° Bachillerato N° 2° Evaluación

FECHA: 02-03-2018 ASIGNATURA: Matemáticas
(1.55.1)





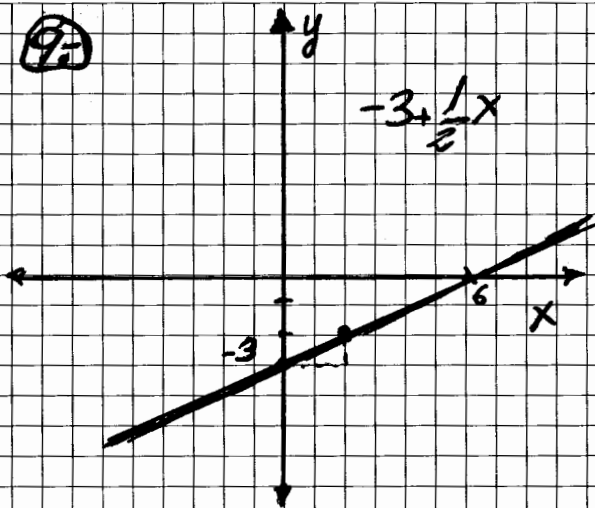
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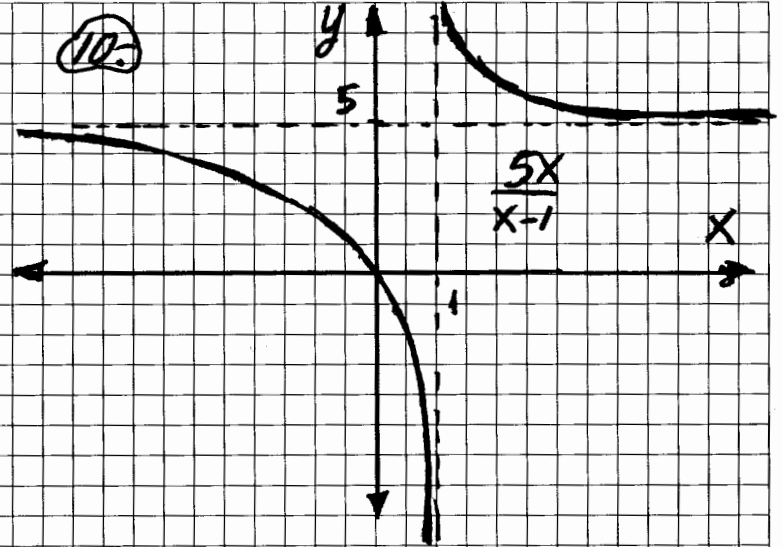
CURSO: N°

FECHA: ASIGNATURA:

9.)



10.)



11.)

$$1.) y' = \frac{2x(x+1) - (x^2+1)}{(x+1)^2} = \frac{2x^2+2x-x^2-1}{(x+1)^2} = \frac{x^2+2x-1}{(x+1)^2}$$

$$2.) y' = \frac{2-2x}{1+(2x-x^2)^2}$$

$$3.) y' = \frac{1-2x}{4\sqrt[4]{(x-x^2)^3}}$$

$$4.) y' = 1 \cdot e^{x^2} + 2x^2 e^{x^2} = (1+2x^2)e^{x^2}$$

$$5.) y' = 4(3x^2-x+1)^3(6x-1)$$

$$6.) y' = \frac{-1}{x^2} + 2x - \frac{1}{x}$$

$$7.) y' = \frac{1\sqrt{x+1} - x \frac{1}{2\sqrt{x+1}}}{(x+1)}$$

$$8.) y' = \frac{2(x-2)}{4} = \frac{x-2}{2}$$

$$9.) y' = 3000 \cdot 12^x \ln 12$$



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$$10.) y = \sqrt[3]{x-1} + (x+1) \frac{1}{3\sqrt[3]{(x-1)^2}}$$

$$1.) \lim_{x \rightarrow \infty} \frac{3x^2 - 2}{3 - x^2 + 3x} \stackrel{\frac{\infty}{\infty}}{=} \lim_{x \rightarrow \infty} \frac{6x}{-2x + 3} \stackrel{\frac{\infty}{\infty}}{=} \lim_{x \rightarrow \infty} \frac{6}{-2} = \boxed{-3}$$

$$2.) \lim_{x \rightarrow \infty} \frac{e^x + x}{x^2 - 3x - 1} \stackrel{\frac{\infty}{\infty}}{=} \lim_{x \rightarrow \infty} \frac{e^x + 1}{2x - 3} \stackrel{\frac{\infty}{\infty}}{=} \lim_{x \rightarrow \infty} \frac{e^x}{2} = \frac{\infty}{2} = \boxed{\infty}$$

$$3.) \lim_{x \rightarrow 0} \frac{x+1}{x^2} = \frac{1}{0} = \boxed{+\infty}$$

$$4.) \lim_{x \rightarrow 1} \frac{3x^2 - 3}{x^2 - 3x + 2} \stackrel{\frac{0}{0}}{=} \lim_{x \rightarrow 1} \frac{6x}{2x - 3} = \frac{6}{-1} = \boxed{-6}$$

$$5.) \lim_{x \rightarrow 1} \log_2(x+1) - 3 = \log_2 2 - 3 = 1 - 3 = \boxed{-2}$$

$$6.) \lim_{x \rightarrow 3} \frac{x-3}{\sqrt{x^2-9}} \stackrel{\frac{0}{0}}{=} \lim_{x \rightarrow 3} \frac{1}{\frac{2x}{2\sqrt{x^2-9}}} = \lim_{x \rightarrow 3} \frac{\sqrt{x^2-9}}{x} = \frac{0}{3} = \boxed{0}$$

$$7.) \lim_{x \rightarrow 0^+} x \cdot \ln x = \lim_{x \rightarrow 0^+} \frac{\ln x}{\frac{1}{x}} \stackrel{\frac{-\infty}{\infty}}{=} \lim_{x \rightarrow 0^+} \frac{\frac{1}{x}}{\frac{-1}{x^2}} = \lim_{x \rightarrow 0^+} -x = \boxed{0}$$

$$8.) \lim_{x \rightarrow \infty} \left(\frac{x^2}{2x^2-1}\right)^x = \left(\frac{1}{2}\right)^\infty = \boxed{0}$$

$$9.) \lim_{x \rightarrow \infty} \sqrt{x^2+2} - x = \frac{\sqrt{x^2+2} + x}{\sqrt{x^2+2} + x} = \lim_{x \rightarrow \infty} \frac{x^2+2-x^2}{\sqrt{x^2+2} + x} = \lim_{x \rightarrow \infty} \frac{2}{\sqrt{x^2+2} + x} = \frac{2}{\infty} = \boxed{0}$$

$$10.) \lim_{x \rightarrow \infty} \left(\frac{x}{x+1}\right)^{2x} = e^{\lim_{x \rightarrow \infty} 2x \left(\frac{x}{x+1} - 1\right)} = e^{\lim_{x \rightarrow \infty} \frac{-2x}{x+1}} = e^{-2} = \boxed{1/e^2}$$