Bellwork Alg 2 Wednesday, February 19, 2019

Find all the equation of the Horizontal Asymptotes and y-intercepts, if any.

1. $y = \frac{3x^2 - 12x + 7}{8x^2 - 6x - 10}$

EQ of HA:

y-int:

2. $y = \frac{6x^2 - 18}{x^3 + 2x^2 + 9x}$

EQ of HA:

y-int:

3. $y = \frac{x^3 + 10x^2 + 12x}{5x^2 + 4x - 3}$

EQ of HA:

y-int:

4. If the equation $y = (x - 6)(x + 12)$ is graphed in the x-y plane, what is the y- coordinate of the parabola's vertex?

A. 6 B. -12 C. -81 D. -72

5. In right $\triangle ABC$, the longest side AB, is 4 feet long, and $\angle$'s BAC & ABC are equal. What is the perimeter of the triangle in feet.

A. 8 B. $4\sqrt{2}$ C. $4 + 4\sqrt{2}$ D. 12 E. $8 + 4\sqrt{2}$

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ANSWERS

Find all the equation of the Horizontal Asymptotes and y-intercepts, if any.

1. $y = \dfrac{3x^2 - 12x + 7}{8x^2 - 6x - 10}$

EQ of HA: $y = 3/8$

y-int: $\dfrac{7}{-10}$

2. $y = \dfrac{6x^2 - 18}{x^3 + 2x^2 + 9x}$

EQ of HA: $y = 0$

y-int: $\dfrac{-18}{0}$ No y-int

3. $y = \dfrac{x^3 + 10x^2 + 12x}{5x^2 + 4x - 3}$

EQ of HA: NO HA

y-int: $\dfrac{0}{-3} = 0$

4. If the equation $y = (x - 6)(x + 12)$ is graphed in the x-y plane, what is the y- coordinate of the parabola's vertex?

A. 6 B. −12 C. −81 D. −72

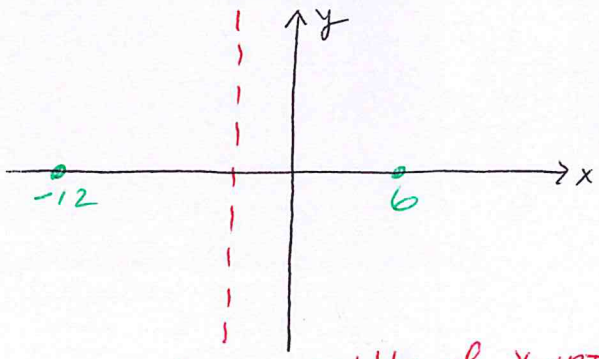
X-INTERCEPTS ARE −12 & 6

LOS: $x = -3$ → x-coord of the vertex

Vertex: $(-3, \ )$

$y = (-3 - 6)(-3 + 12)$

$y = (-9)(9) = -81$



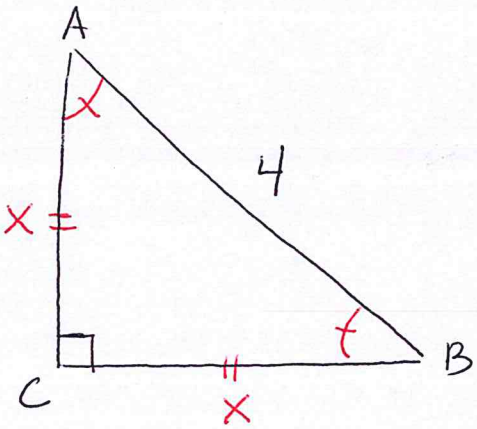
LOS - middle of X-INT

$x = \dfrac{-12 + 6}{2} = -3$

5. In right $\triangle ABC$, the longest side AB, is 4 feet long, and $\angle$'s BAC & ABC are equal. What is the perimeter of the triangle in feet.

A. 8 B. $4\sqrt{2}$ C. $4 + 4\sqrt{2}$ D. 12 E. $8 + 4\sqrt{2}$

isosceles RT $\triangle$: 45°-45°-90°



$4^2 = x^2 + x^2$

$\dfrac{16}{2} = \dfrac{2x^2}{2}$

$\sqrt{x^2} = \sqrt{8}$

$x = 2\sqrt{2}$

perimeter $= x + x + 4$

$2\sqrt{2} + 2\sqrt{2} + 4$

$= 4\sqrt{2} + 4$