Bellwork Monday, December 11, 2017

1. Find the coordinates of the Vertex and Focus and equation of the Directrix: $x + 7 = -\frac{5}{3}(y + 2)^2$

Vertex: Focus: Directrix:

2. A triangle has a perimeter 13. The two shorter sides have integer lengths equal to x and x + 1. Which of the following could be the length of the other side?

A. 2
B. 4
C. 6
D. 8
E. 10

ANSWERS

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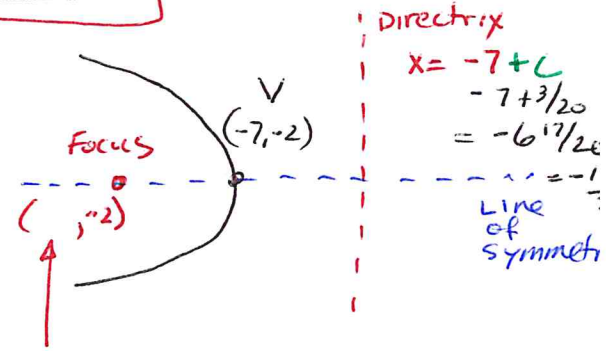
1. Find the coordinates of the Vertex and Focus and equation of the Directrix: $x + 7 = -\frac{5}{3}(y+2)^2$

Vertex: $(-7, -2)$

Focus: $(-7\ 3/20, -2)$ or $(-143/20, -2)$

Directrix: $x = -6\ 17/20$ or $x = -\frac{137}{20}$

$c = \frac{1}{4|a|} = \frac{1}{4(\frac{5}{3})} = \frac{1}{\frac{20}{3}} = \frac{3}{20}$



$-7 - c$

$-7 - \frac{3}{20}$

$-7\ 3/20$ or $-\frac{143}{20}$

2. A triangle has a perimeter 13. The two shorter sides have integer lengths equal to x and x + 1. Which of the following could be the length of the other side?

A. 2
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Triangle Inequality Theorem

The sum of the lengths of any 2 sides of a triangle must be greater than the third side.

NOT A. – other sides would be > 2

NOT B – one of other sides would be > 4

C – other 2 sides could have a sum of 7 → 3 & 4

NOT D – other 2 sides would have a sum of 5 and, therefore, not make Δ Ineq. thm. true.

NOT E – other 2 sides would have a sum of 3 and, therefore, would not make Δ Ineq. thm. true.