Bellwork Alg 2B Friday, December 8, 2017

1. Find the coordinates of the Vertex and Focus and the equation of the Directrix.

$y = -9(x+7)^2 - 2$

2. Write the equation of this function: Foci are $(5,2)$ and $(5,-24)$ and a Vertex is $(5,-5)$.

EQ:

3. $\sqrt{5}$ percent of $5\sqrt{5}$ =

A. 0.05 B. 0.25 C. 0.5 D. 2.5 E. 25

4. The distance from town A to town B is five miles. C is six miles from B. Which of the following could be the distance from A to C?

I 11 *II* 1 *III* 7

A. *I* only B. *II* only C. *I* and *II* only D. *II* and *III* only E. *I*, *II*, or *III*.

5. If $pqr = 1$, $rst = 0$, and $spr = 0$, which of the following must be zero?

A. p B. q C. r D. s E. t

Bellwork Alg 2B Friday, December 8, 2017

Answers

1. Find the coordinates of the Vertex and Focus and the equation of the Directrix.

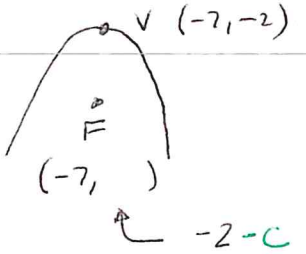
$y = -9(x+7)^2 - 2$

VERTEX: $(-7, -2)$

FOCUS: $(-7, -2\frac{1}{36})$ OR $(-7, -\frac{73}{36})$

DIRECTRIX: $y = -1\frac{35}{36}$ or $y = -\frac{71}{36}$

$c = \frac{1}{4(9)} = \frac{1}{36}$



$y = -2 + c$

$= -2 + \frac{1}{36} = -1\frac{35}{36}$ or $-\frac{71}{36}$

$-2 - c = -2 - \frac{1}{36} = -2\frac{1}{36} = -\frac{73}{36}$

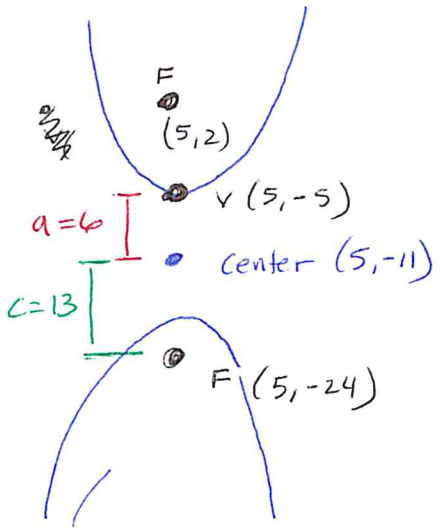
2. Write the equation of this function: Foci are (5,2) and (5,–24) and a Vertex is (5,–5).

EQ:

$$\frac{(y+11)^2}{36} - \frac{(x-5)^2}{133} = 1$$

Center: midpoints of foci

$(5, -11)$



$c^2 = a^2 + b^2$

$169 = 36 + b^2$

$b^2 = 133$

3. $\sqrt{5}$ percent of $5\sqrt{5}$ =

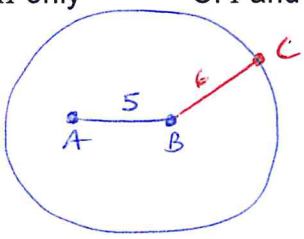
A. 0.05 B. 0.25 C. 0.5 D. 2.5 E. 25

$\frac{\sqrt{5}}{100} = \frac{x}{5\sqrt{5}}$ $x = .25$

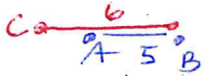
4. The distance from town A to town B is five miles. C is six miles from B. Which of the following could be the distance from A to C?

I 11 *II* 1 *III* 7

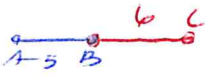
A. *I* only B. *II* only C. *I* and *II* only D. *II* and *III* only E. *I*, *II*, or *III*.



C is any point on this circle



closest C can be to A is 1 mile



FARTHEST C can be from A is 11 mi

IT could also be anything between 1 & 11

5. If $pqr = 1$, $rst = 0$, and $spr = 0$, which of the following must be zero?

A. *p* B. *q* C. *r* D. *s* E. *t*

$p \& r = 1$

$p \neq 0$
$q \neq 0$
$r \neq 0$

$r \cdot s \cdot t = 0$

if $r \neq 0$ then either s or $t = 0$ but you don't know which one

$s p r = 0$

if $p \neq 0$ & $r \neq 0$ then s must be zero