## Bellwork Hon Alg 2 Monday, March 27, 2017

1. If $a < b$ and $a^2 - 2ab + b^2 = 169$, what is the value of $a - b$?

2. If the perimeter of a square is 28, what is the length of the diagonal of the square?
   A. $2\sqrt{14}$ B. $7\sqrt{2}$ C. $7\sqrt{3}$
   D. $14$ E. $28\sqrt{2}$

3. If $a$ is $63\%$ of $x$ and $c$ is $\frac{3}{8}$ of $x$, which of the following is the closest equivalent of the ratio of $a$ to $c$?
   A. $0.006$
   B. $0.236$
   C. $0.381$
   D. $0.595$
   E. $1.680$

4. At Ernie's Fruit Stand, 3 apples and 5 cherries cost \$1.25. 15 apples and 100 cherries cost \$9.25. What is the cost of 6 apples and 35 cherries?
   A. \$3.25
   B. \$3.50
   C. \$3.62
   D. \$4.00
   E. \$5.25

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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# Hon Alg 2 Bellwork Answers

3-27-17

(1) $a^2 - 2ab + b^2 = 169$

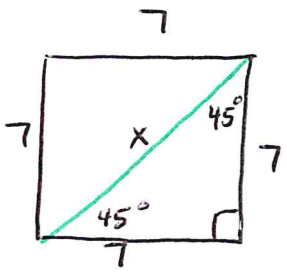
$\sqrt{(a-b)^2} = \sqrt{169}$

$a - b = \pm 13$

if $a < b$ then $a-b$ is negative.

$a - b = -13$

(2)




perimeter = 28
each side = 7

B

$x^2 = 7^2 + 7^2$

$\sqrt{x^2} = \sqrt{98}$

$x = \sqrt{98} = 7\sqrt{2}$

$\sqrt{49 \cdot 2}$

(3) $a = .63x \quad c = \frac{3}{8}x$

$c = .375x$

$\frac{a}{c} = \frac{.63x}{.375x}$ THIS MUST BE $> 1$

SO THE ONLY reasonable answer IS

E

(4) $3A + 5C = 1.25$

$15A + 100C = 9.25$

you could solve this system of eqs then find the cost of $6A + 35C$ or

ADD Eqs to get

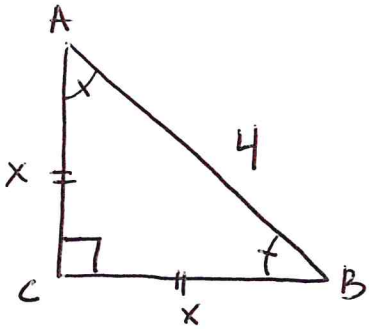
$\frac{18A}{3} + \frac{105C}{3} = \frac{10.50}{3}$

Then ÷ by 3

$6A + 35C = \$3.50$

B

(5)




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

$2x^2 = 16$

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

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

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

$= 4 + 4\sqrt{2}$

C