Name KEY

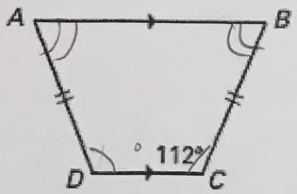
Geo w/Trig Final Exam Review

Unit 9: Quadrilaterals

Chapters 6 & 11

1. Find the missing angle measures of the given figure. *Label them in the diagram.*

a)

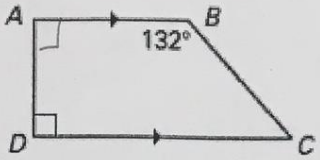


)=112°

+= 68°

= 68°

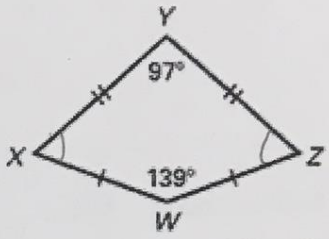
b)



m∠A=90°

m∠C = 48°

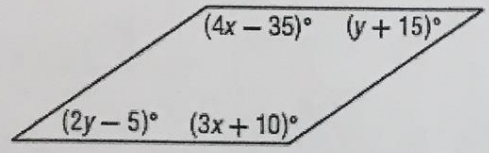
c)



m∠X=62° m∠Z=62°

2. Find the value for x and y so that each quadrilateral is a parallelogram. *Show all work!*

a)



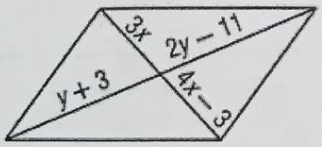
4x − 35 = 3x + 10

x = 45

y + 15 = 2y − 5

20 = y

b)



y + 3 = 2y − 11

14 = y

3x = 4x − 3

3 = x

3. True/False: For each of the following, answer true or false.

a) The diagonals of a parallelogram are congruent and perpendicular. False

b) The opposite angles of a rhombus are congruent. True

c) Opposite sides of a trapezoid are congruent. False

only one pair of opp sides

d) The diagonals of a square are congruent and perpendicular. True

e) All four sides of a rhombus are congruent. True

f) Both diagonals of a kite bisect each other. False

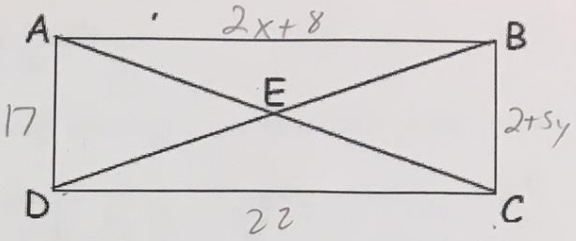
only one diagonal bisects the other

4. In rectangle $ABCD$, $AB = 2x + 8$, $BC = 2 + 5y$, $CD = 22$, and $AD = 17$. Find the value of x and y.

$2x+8=22$ $\quad 17=2+5y$

$2x=14$ $\quad 15=5y$

$x=7$ $\quad y=3$



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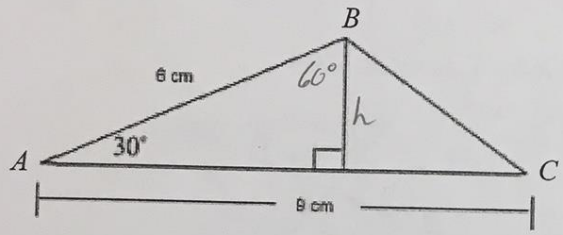
5. Find the area of $\triangle ABC$.



$\frac{30}{1} \quad \frac{60}{\sqrt{3}} \quad \frac{90}{2}$

$h \qquad\quad 6$

$\frac{1}{h} = \frac{2}{6}$

$6 = 2h$

$h = 3$

$A = \frac{1}{2}(9)(3)$

$A = 13.5\ cm^2$

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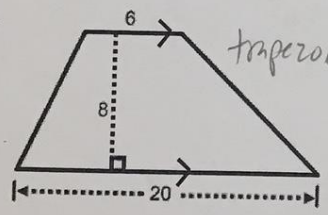
6. Find the area of each figure. *Show all work, including the formula and your substitution!*

a.



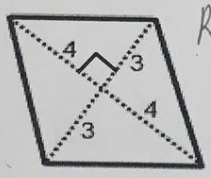
trapezoid

$A = \frac{1}{2}(8)(6+20)$

$= \frac{1}{2}(8)(26)$

$104\ units^2$

b.

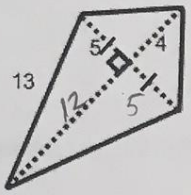


Rhombus

$A = \frac{1}{2} d_1 d_2$

$A = \frac{1}{2}(8)(6)$

$A = 24\ units^2$



Kite

$A = \frac{1}{2} d_1 d_2$

$A = \frac{1}{2}(10)(16)$

$A = 800\ units^2$