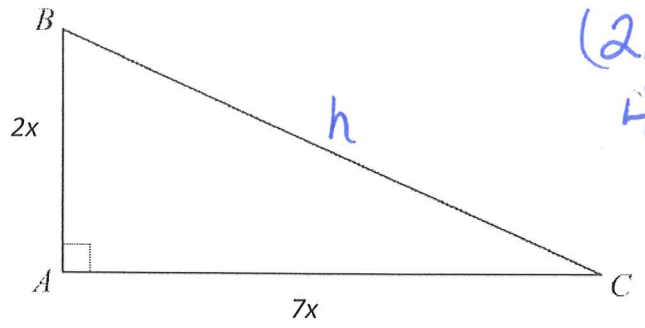
Name: Key

Midterm Practice Day ONE

1. Trapezoid is a quadrilateral with one pair of opposite sides parallel.
2. Rectangle is a quadrilateral with 4 right angles.
3. Rhombus is a quadrilateral with 4 congruent sides.
4. parallelogram is a quadrilateral with opposite sides parallel.
5. Kite is a quadrilateral with 2 pairs of consecutive congruent sides.
6. Isosceles trap is a quadrilateral with one pair of opposite sides parallel and non parallel sides (legs) congruent.
7. Square is a quadrilateral with 4 right angles and congruent sides.

8. In the figure below, ΔABC is a right triangle with legs that measure 2x and 7x inches, respectively. What is the length, in inches, of the hypotenuse?



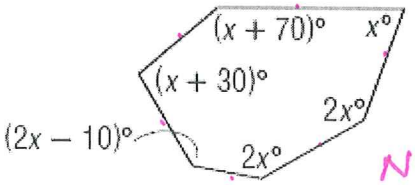
$(2x)^2+(7x)^2=h^2$

$4x^2+49x^2=h^2$

$53x^2=h^2$

$h=x\sqrt{53}$

9. Find x in the figure below.



$n=6$

Sum of 6 int. $\angle$s

$180(n-2)=180(6-2)=720°$

Now add all $\angle$s and set = to 720°

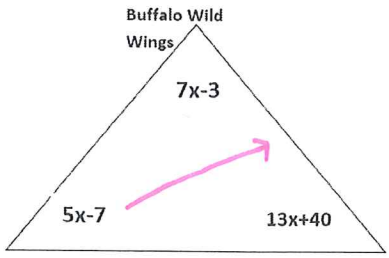
$2x-10+2x+2x+x+x+70+x+30=720$

$9x+90=720$

$9x=630$

$x=70°$

10. Partridge Creek, Buffalo Wild Wings, and Dakota High School form a triangle on a map. What route would have the shortest drive? (i.e. Which two buildings are closest together?) Show me mathematically



Δ sum

$7x-3+13x+40+5x-7=180$

$25x+30=180$

$25x=150$

$x=6$

X= 6 <BW3 = 39° <DHS= 118° <PC= 23°

BW3 and DHS are the closest together

11. If all sides of a quadrilateral are 17m, classify all that apply.

I. Parallelogram ✓
II. Rhombus ✓
III. Rectangle
IV. Square

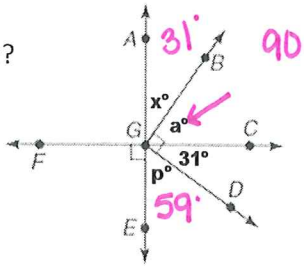
a. I only
b. II only
c. III only
d. IV only
e. I & II
f. II & IV
g. I, II & IV
h. ALL four

12. If all angles of a quadrilateral are 90 degrees and all sides are 17m, classify all that apply.

I. Parallelogram
II. Rhombus
III. Rectangle
IV. Square

a. I only
b. II only
c. III only
d. IV only
e. I & II
f. II & IV
g. I, II & IV
h. ALL four

13. What is the value of $2a + 8p - 7x$?

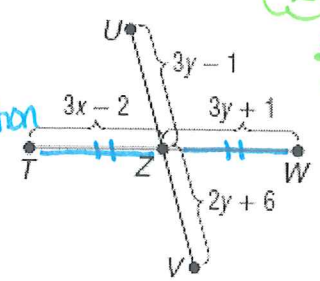


90-31=59

2(59)+8(59)-7(31)

= 373°

14. Find x and y if $\overline{UV}$ bisects $\overline{TW}$ and $UV = 40$.



1st UZ + ZV = UV Segment addition

$3y-1+2y+6=40$

$5y+5=40$

$5y=35$

$y=7$

2nd TZ ≅ ZW def of seg bisector

$3x-2=3y+1$

$3x-2=3(7)+1$

$3x-2=22$

$3x=24$

$x=8$