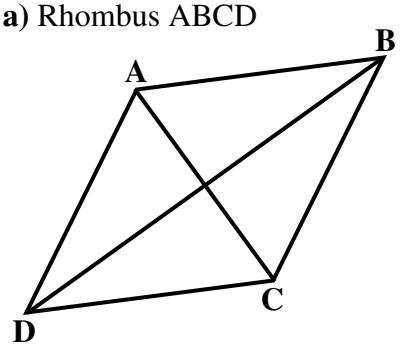
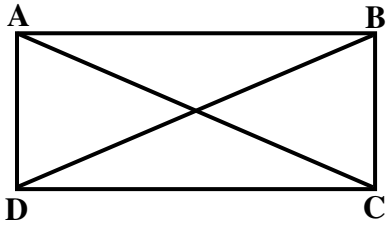
Geometry Name:_____
Assignment 8.3

1. Label the indicated parallelogram with its own specific properties.

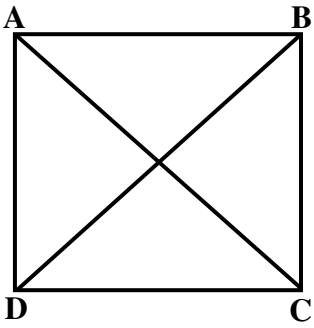
a) Rhombus ABCD



b) Rectangle ABCD



c) Square ABCD



Tip for problems 2, 3, and 4: A rhombus, rectangle, and square are all parallelograms.

2. Find the indicated measures of rhombus PQRS.

Tip: Part **d** and **e** require an understanding of the properties of a 30°-60°-90° triangle.

a) m∠QPR =

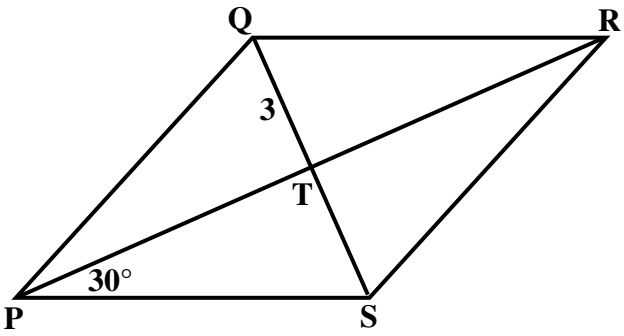
b) m∠QTP =

c) m∠TQP =

d) TP =

e) QP =

f) QR =



3. Find the indicated measures of rectangle WXYZ.

Tip: Part **e** requires an understanding of the properties of an isosceles triangle.

a) PX =

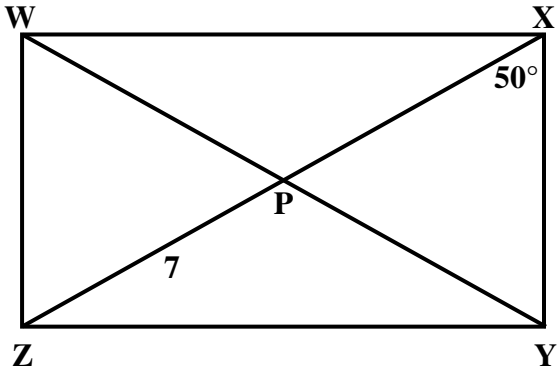
b) WP =

c) WY =

d) m∠WXP =

e) m∠XWP =

f) m∠ZYW =



4. Find the indicated measures of square ABCD.

Tip: Part **f** requires an understanding of the properties of a 45°-45°-90° triangle.

a) m∠CEB =

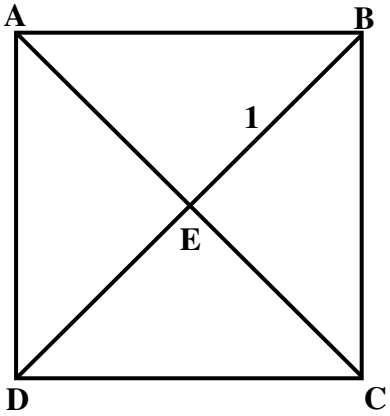
b) EC =

c) m∠EBC =

d) m∠ECB =

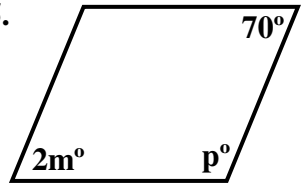
e) AC =

f) BC =

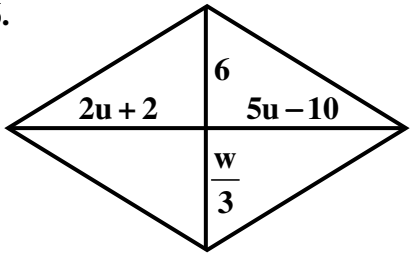


Find the value of each variable in the parallelogram.

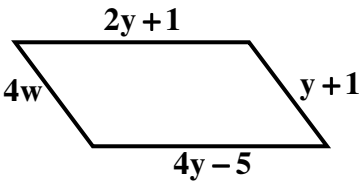
5.



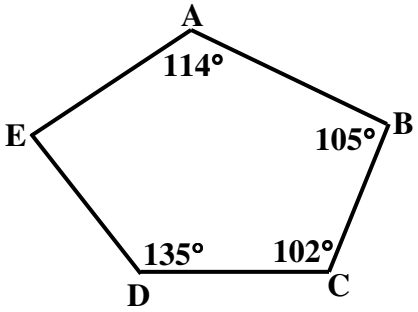
6.



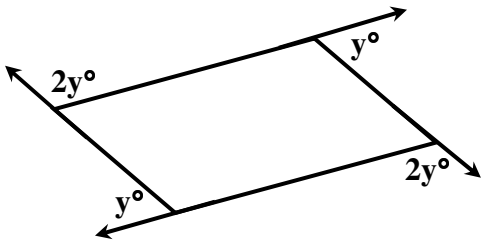
7.



8. Find m∠DEA.



9. Find the value of the variable.

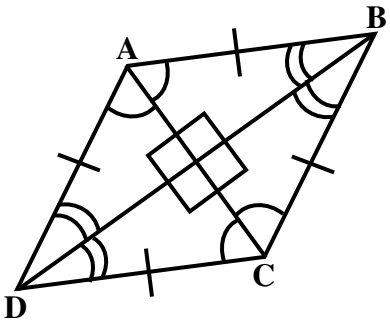


10. The measure of each <u>interior</u> angle of a regular polygon is 120°. How many sides does the polygon have? What is the name of the polygon?

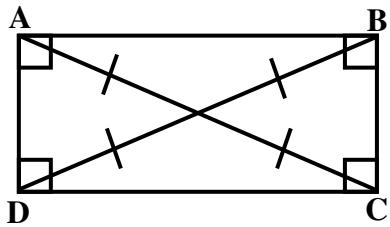
11. Find the measure of each <u>exterior</u> angle of a regular decagon.

Answer Key:

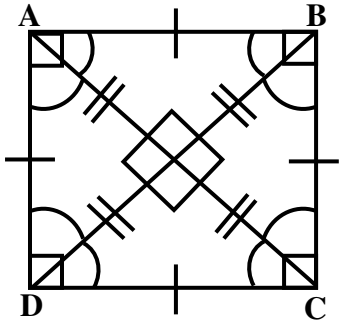
1) a)



b)



c)



2) a) m∠QPR = 30° **b)** m∠QTP = 90° **c)** m∠TQP = 60° **d)** TP = $3\sqrt{3}$ **e)** QP = 6 **f)** QR = 6

3) a) PX = 7 **b)** WP = 7 **c)** WY = 14 **d)** m∠WXP = 40° **e)** m∠XWP = 40° **f)** m∠ZYW = 40°

4) a) m∠CEB = 90° **b)** EC = 1 **c)** m∠EBC = 45° **d)** m∠ECB = 45° **e)** AC = 2 **f)** BC = $\sqrt{2}$

5) m = 35, p = 110 **6)** u = 4, w = 18 **7)** y = 3, w = 1 **8)** m∠DEA = 84° **9)** y = 60

10) n = 6, Hexagon **11)** 36°