Chapter 6 Practice Test 2

Name _____

Tell the sum of the measures of the interior angles of the following shapes.

1. Pentagon = _____ 2. Decagon = _____ 3. Heptagon = _____

Figure 1

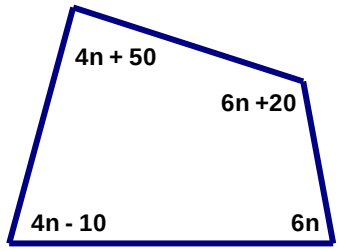


Figure 2

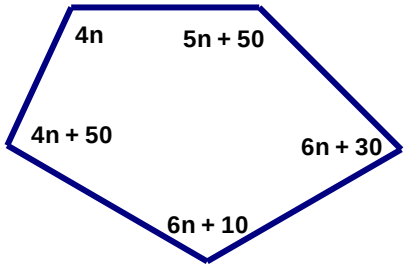
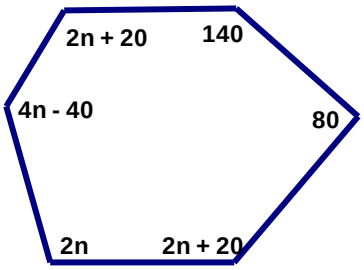


Figure 3



Find the value of n in the figures above.

4. Figure 1 = _____ 5. Figure 2 = _____ 6. Figure 3 = _____

7. How many degrees is each interior angle of a regular decagon? _____

8. How many degrees is each interior angle of a regular nonagon? _____

9. How many degrees is each interior angle of a regular 20-gon? _____

10. How many degrees is each exterior angle of a hexagon? _____

11. How many degrees is each exterior angle of an decagon? _____

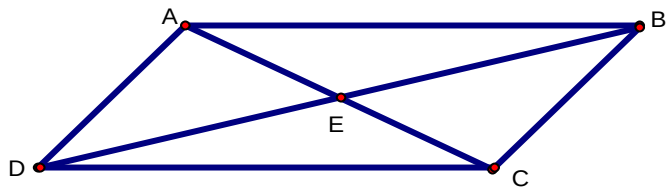
12. The measure of an interior angle of a regular polygon is 162 degrees.
How many sides must this polygon have?
_____

13. The measure of an interior angle of a regular polygon is 171 degrees.
How many sides must this polygon have?
_____

14. I am planning to build a large flowerbed in the shape of a regular pentagon. I will use thick pieces of wood like railroad ties that are 12 feet in length. Once I have the first piece of wood put down, what interior angle should I make with the next piece of wood that I place down in order to make sure that I get a regular hexagon (remember that regular means all the angles will be the same along with the lengths, which you already know is 12 feet).

_____

15. Consider the parallelogram below. Find the missing sides and angles listed below given that EC = 22 cm, BC = 8 cm, $\angle DAE = 60°$, $\angle BCD = 110°$



AC = _____ AD = _____ $\angle BAD =$ _____

$\angle BAC =$ _____ $\angle BCA =$ _____ $\angle ACD =$ _____

Find the fourth missing point of parallelogram ABCD given the following points. Be careful!

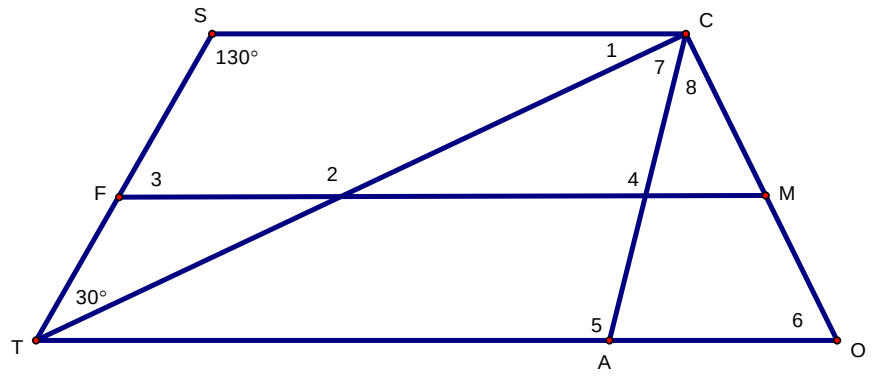
_____ 16. A = (0, 0) B = (5, 0), C = (9, 4)

_____ 17. A = (0, 0) B = (5, 0), C = (3, 7)

_____ 18. A = (2, 3) B = (6, 3), D = (-1, 9)

_____ 19. A = (5, -3) B = (11, -3), C = (7, 10)

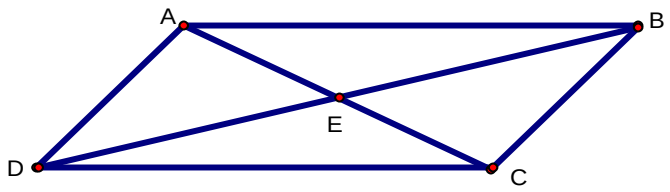
20. Given: SCOT is an isosceles trapezoid, SCAT is a parallelogram and $\overline{SC} \parallel \overline{FM} \parallel \overline{TO}$. Find the missing angles listed below.



$\angle 1 =$ ____ $\angle 2 =$ ____ $\angle 3 =$ ____ $\angle 4 =$ ____

$\angle 5 =$ ____ $\angle 6 =$ ____ $\angle 7 =$ ____ $\angle 8 =$ ____

Use the parallelogram below for questions 21-23.



_____21. If AE = 4n – 8, DE = 3n + 6, and CE = 2n + 4 in the parallelogram above, what is the value of n?

_____22. If $\angle ADC = 70°$ in the parallelogram above, what is $\angle DCB$?

_____23. If in the parallelogram above DC = 5n + 10, BC = n + 10, and AB = 4n + 22, what is n?

Figure 1

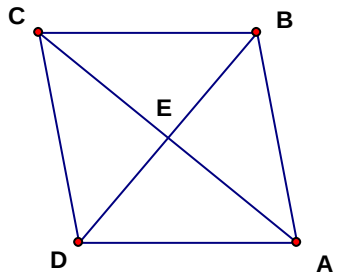


Figure 2

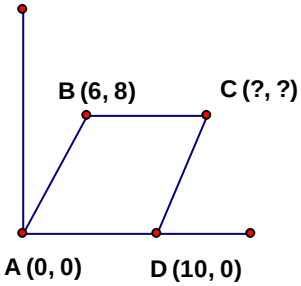
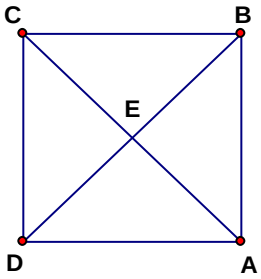


Figure 3



_____ 24. In figure 1 above, ABCD is a rhombus. If AC = 6 cm and BD = 8 cm, what is the perimeter of ABCD?

_____ 25. If in figure 2 ABCD is a rhombus, what are the coordinates for C?

_____ 26. In figure 3, ABCD is a rectangle. If AC = 40 cm and BC = 32 cm, what is the length of $\overline{DE}$?

_____ 27. In figure 3, ABCD is a rectangle. If AC = 10 cm and BC = 8 cm, what is the length of $\overline{DC}$?