Unit 9 Practice Test: 2D Geometry   NAME_____

Part I: Accelerated 7th Grade Math

For 1–8, use the drawing on the right. Line p ‖ to line m. Identify the relationship of each pair of angles.

1. <a and <h

#1 answer: _____

2. <d and <f

#2 answer: _____

3. <d and <e
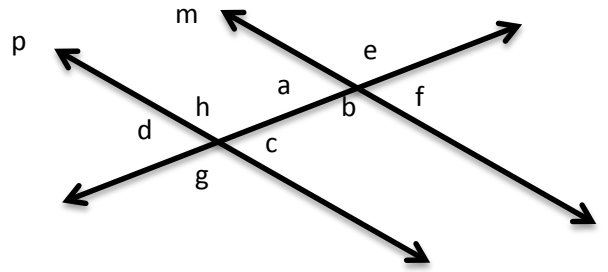
#3 answer: _____

4. <c and <d

#4 answer: _____

5. <c and <h

#5 answer: _____

For 6–14, use the picture to the right to answer each.

6. Identify the angle complementary to <4. #6 answer: _____

7. Identify the angle vertical to <2 .   #7 answer: _____

8. Identify the angle supplementary to <3 . #8 answer: _____

9. Identify the 2 angles adjacent to <5 ?   #9 answer: _____
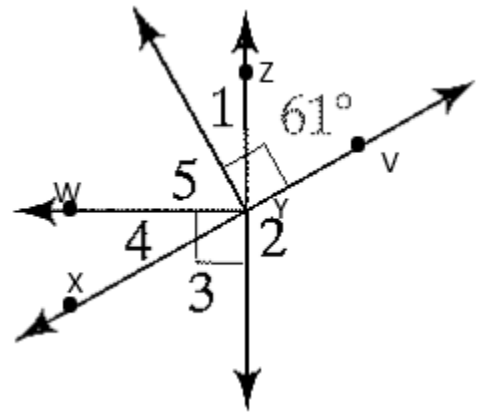
10. Identify the m<1 ? #10 answer: _____

11. Identify the m<2 ? #11 answer: _____

12. Identify the m<3 ? #12 answer: _____
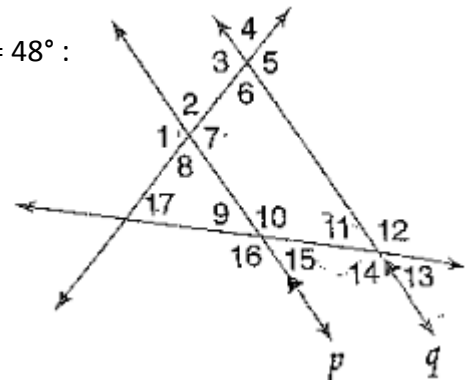
13. Identify the m<4 ? #13 answer: _____

14. Identify the m<5 ? #14 answer: _____

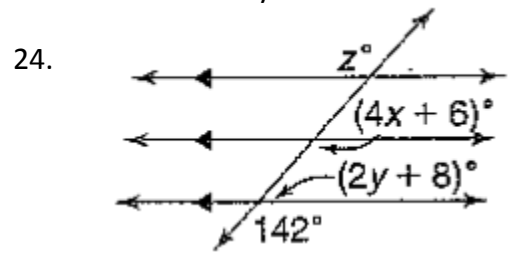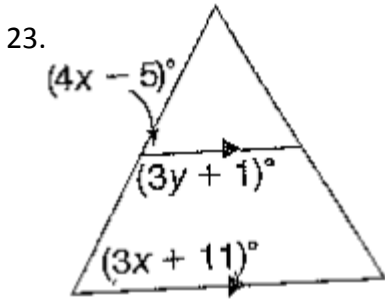For 15–22, find the measures of the following angles if m<1 = 107° and m<11 = 48° :

15. m<2 = _____   16. m<3 = _____

17. m<4 = _____   18. m<9 = _____

19. m<10 = _____   20. m<13 = _____

21. m<15 = _____   22. m<17 = _____

For 23 & 24, evaluate the value of the missing variables in the picture shown. Show your work:

23.

$(4x - 5)°$

$(3y + 1)°$

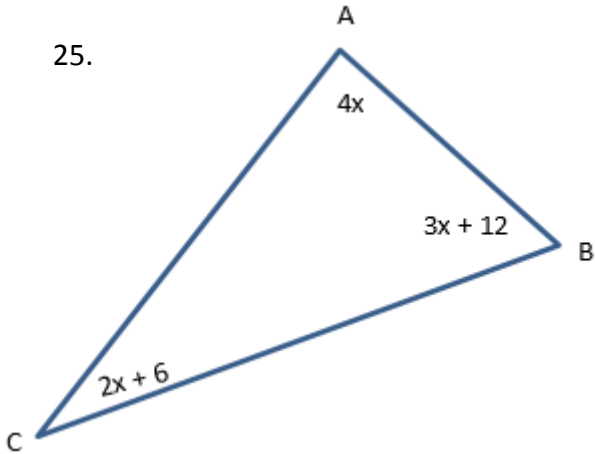$(3x + 11)°$

24.

$z°$

$(4x + 6)°$

$(2y + 8)°$
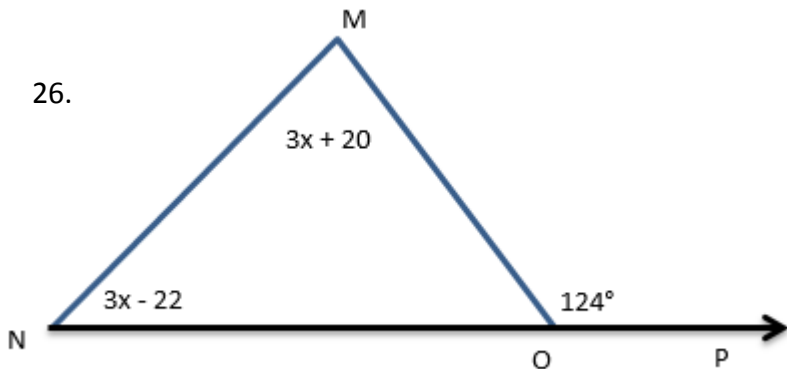
$142°$

#24 x = _____

#23 x = _____   #23 y = _____   #24 y = _____   #24 z = _____

For 25 & 26, evaluate the value of all of the angle measures in each of the pictures shown. Show your work!

A

25.

4x

3x + 12

B

2x + 6

C

#25 <A = _____

#25 <B = _____

#25 <C = _____

M

26.

3x + 20

3x - 22

124°

N

O   P

#26 m<M = _____

#26 m<N = _____
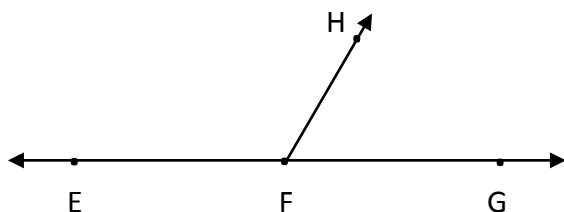
#26 m<MON = _____

#26 m<NOP = _____

For 27–29, *sketch the following triangles. Use hash marks on the triangle's sides to show if they are congruent or not.*

27. acute and scalene
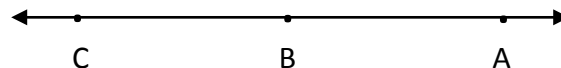
28. right and isosceles

29. equilateral and acute

30.

H

E   F   G

#30 Identify the m<HFG using your protractor: _____

31.

C   B   A

#31 Draw <DBA = 64˚ and label it correctly.

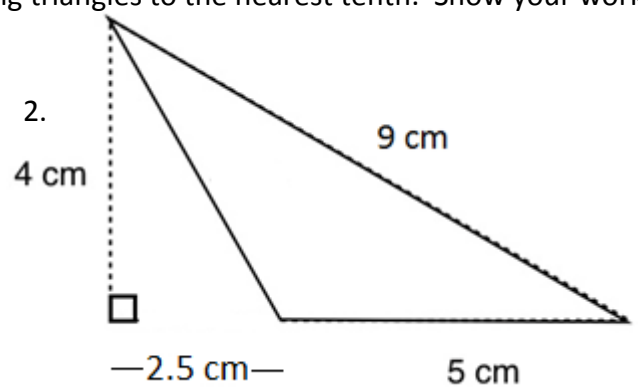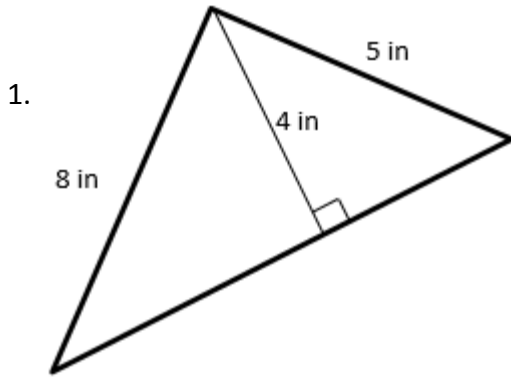32. Use your protractor and ruler to draw a triangle with an angle of 45°, a side of 6 cm, and another angle of 65°

33. Use your protractor and ruler to draw a triangle with sides of 8 cm, 2 cm, and 4 cm.

Unit 9 Practice Test: 2D Geometry   NAME_____

Part II: Accelerated 7th Grade Math

For 1 & 2, evaluate the area and perimeter of the following triangles to the nearest tenth. Show your work.

1.

5 in

4 in

8 in

2.

4 cm

9 cm
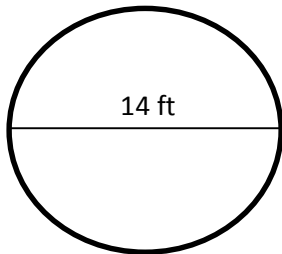
—2.5 cm—   5 cm

#1 Perimeter: _____   #2 Perimeter: _____

#1 Area: _____   #2 Area: _____

3. Evaluate the EXACT area and circumference of the circle. Show all of your work for full credit.

#3 Area: _____

14 ft

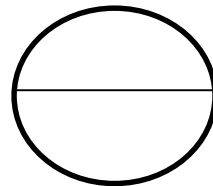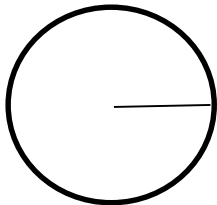#3 Circumference: _____

4. Evaluate the radius of the circle.   5. Evaluate the diameter of the circle.
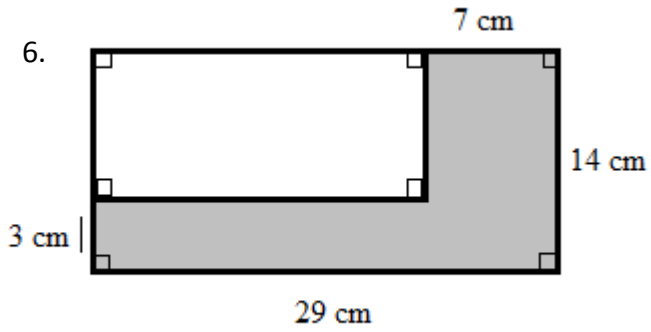
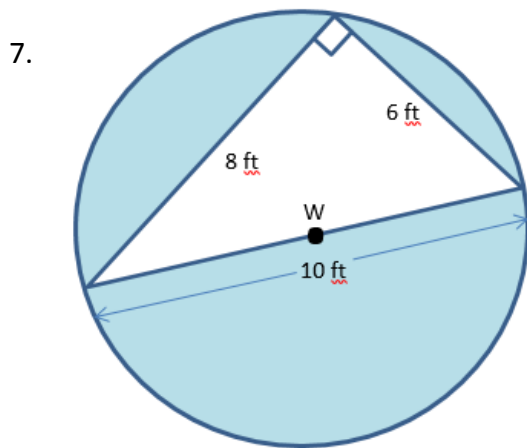Estimate to nearest tenth. Show work.   Estimate to nearest tenth.   Show work.

Area = 164 cm^2 Circumference = 62.25 m
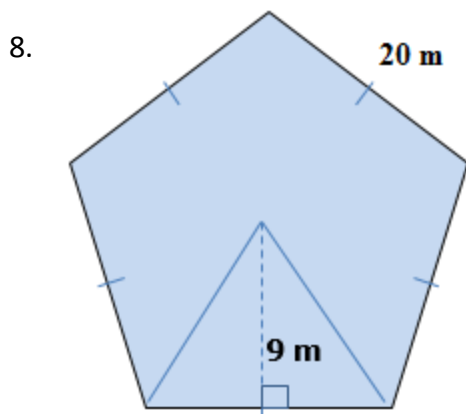
#4 answer: _____   #5 answer: _____

For 6–10, evaluate the area of the shaded region. Show all of your work for full credit. When necessary put your answers to the nearest tenth.
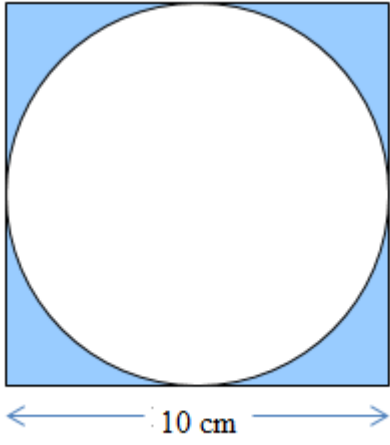
6.

7 cm

14 cm

3 cm

29 cm

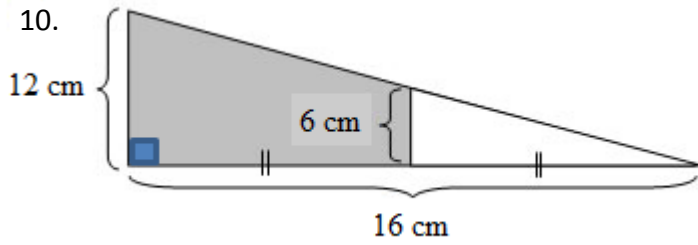#6 answer: _____

7.

6 ft

8 ft

W

10 ft

#7 answer: _____

8.

20 m

9 m

#8 answer: _____

9.

10 cm

#9 answer: _____

10.

12 cm

6 cm

16 cm

#10 answer: _____