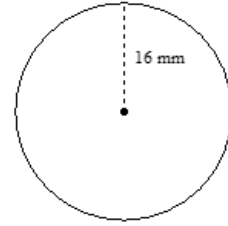




19. Find the circumference and area of the circle to the nearest tenth. Use 3.14 for π .

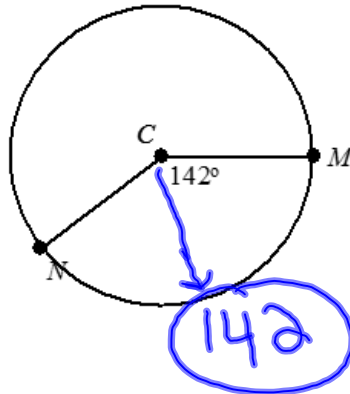


area
 $3.14(16)^2$
803.84
circumf.
 $3.14(2)(16)$
100.48

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20. What is $m\widehat{MN}$

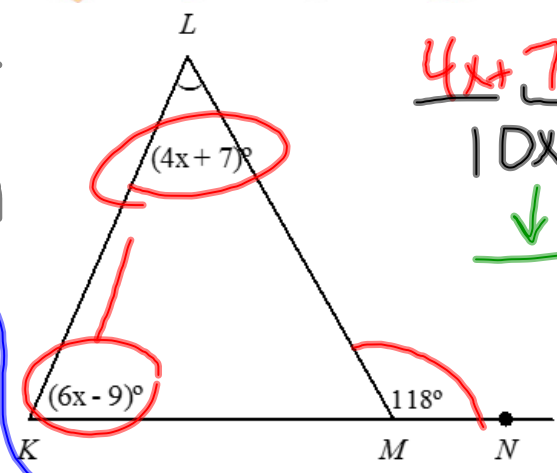


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21. Find $m\angle k$

$6(12) - 9$
 63



$4x + 7 + 6x - 9 = 118$

$10x - 2 = 118$
 $\downarrow +2 \quad +2$

$10x = 120$
 $\frac{10x}{10} = \frac{120}{10}$

$x = 12$

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22. Solve the proportion $\frac{15}{18} = \frac{2}{4w}$ Express your answer as a fraction.

$\frac{15}{18} = \frac{2}{4w}$
 $\frac{18}{36} \times \frac{15}{60} = \frac{2}{4w}$
 $\frac{36 \div 6}{60 \div 6} = \frac{6 \div 2}{10 \div 2} = \left\{ \frac{3}{5} \right\}$

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23. If $\angle 1$ and $\angle 2$ are vertical angles and $m\angle 1 = 3x + 16$ and $m\angle 2 = 4x - 16$, what is

$m\angle 1$

$$3x + 16 = 4x - 16$$

$$m\angle 1 = (3 \times 32) + 16 = 112$$

$$16 = 4x - 16 \quad 32 = 4x \quad x = 32$$

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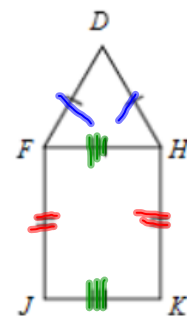


24. Identify the line segments that are congruent in the diagram.

$$\overline{DF} \cong \overline{DH}$$

$$\overline{FH} \cong \overline{JK}$$

$$\overline{FJ} \cong \overline{HK}$$



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25. Find the angle measures of $ACDB$.

$$2x + 3 + 3x + 7$$

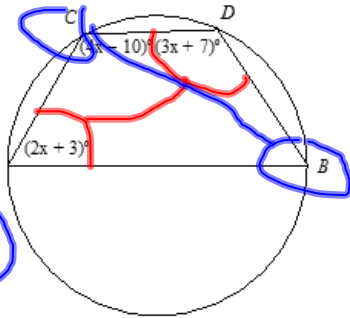
$$\begin{array}{r} 5x + 10 = 180 \\ -10 \quad -10 \\ \hline 5x = 170 \\ \div 5 \quad \div 5 \\ \hline x = 34 \end{array}$$

$$A \quad 2(34) + 3 = 71$$

$$C \quad 4(34) - 10 = 126$$

$$D \quad 3(34) + 7 = 109$$

$$\begin{array}{r} 180 \\ -126 \\ \hline 54 \end{array}$$

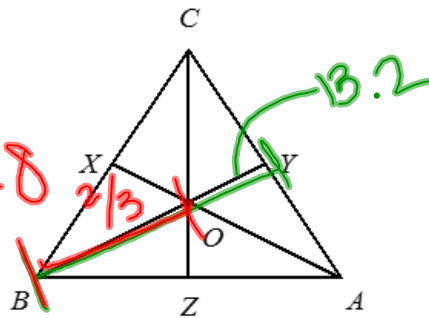


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26. In $\triangle ABC$, $BY = 13.2$ and $CO = 12$. \overline{AX} , \overline{BY} , and \overline{CZ} are medians. Find BO .

$$13.2 \times \frac{2}{3} = 8.8$$

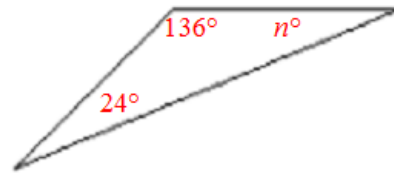


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27. Find n in the obtuse triangle.

$$\begin{array}{r} 136 \\ + 24 \\ \hline 160 \end{array} \quad \begin{array}{r} 180 \\ - 160 \\ \hline 20 \end{array}$$

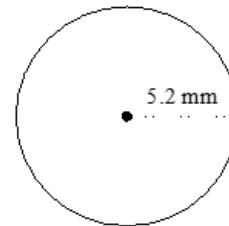


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28. Find the area of the circle to the nearest tenth. Use 3.14 for π .

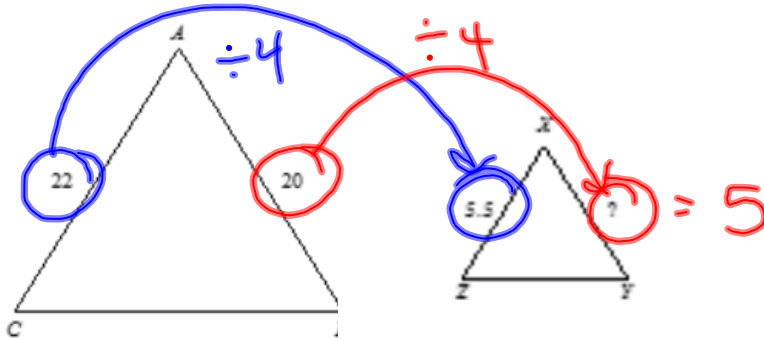
$$\begin{aligned} A &= \pi r^2 \\ A &= \pi (5.2)^2 \\ A &= \pi (27.04) \\ A &= 3.14(27.04) \\ A &= 84.91 \text{ mm}^2 \end{aligned}$$



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29. $\triangle ABC \sim \triangle XYZ$. Find XY .



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0. Tell whether the given side lengths form a ~~right~~ triangle.

7, 12, 17

\checkmark
 $19 > 17$
Yes!

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31. On a number line, point G is located at 10 and point H is located at 8. What is the midpoint of \overline{GH}

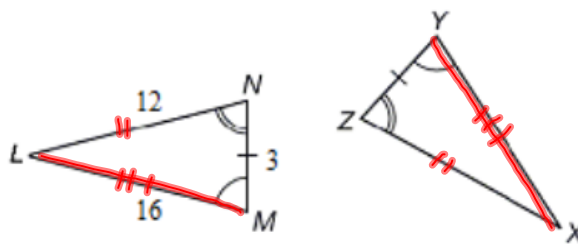
$$\frac{10+8}{2} = \frac{18}{2} = \boxed{9}$$

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32. What is the measure of \overline{XY} ?

$$\boxed{16}$$

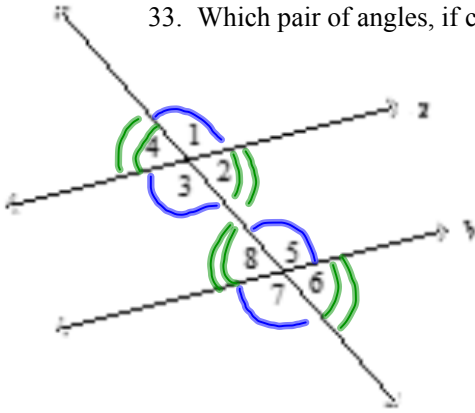


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Use the diagram from the following problems.

33. Which pair of angles, if congruent, proves lines a and b are parallel?



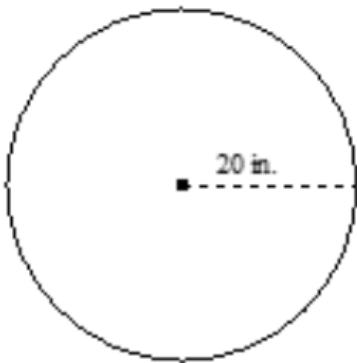
$$\angle 1 \cong \angle 3 \cong \angle 5 \cong \angle 7$$

$$\angle 4 \cong \angle 2 \cong \angle 8 \cong \angle 6$$

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34. Find the circumference of the circle to the nearest tenth. Use 3.14 for π



$$C = 2\pi r$$

$$C = 2\pi(20)$$

$$C = 40\pi = 40 \cdot 3.14$$

$$C = 125.6 \text{ in}$$

$$\begin{array}{r} 40.00 \\ 3.14 \\ \hline 120.00 \\ 40.00 \\ \hline 125.60 \end{array}$$

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35. One of the acute angles in a right triangle has a measure of 47.6° . What is the measure of the other acute angle?

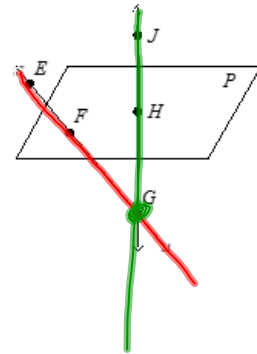


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36. What is the intersection of \overleftrightarrow{EF} and \overleftrightarrow{JG} ?

G



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