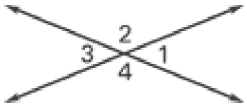
Name: _____ **Class:** _____ **Date:** _____ **ID: A**

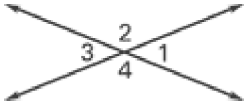
Chapter 1 Midterm Review

Short Answer

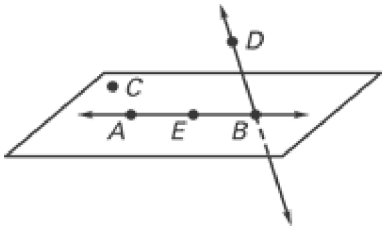
1. If $m\angle 2 = 95°$, then $m\angle 1 =$ _____.



2. If $m\angle 3 = 28°$, then $m\angle 4 =$ _____.

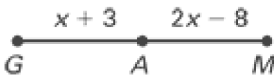


3. Name three collinear points.

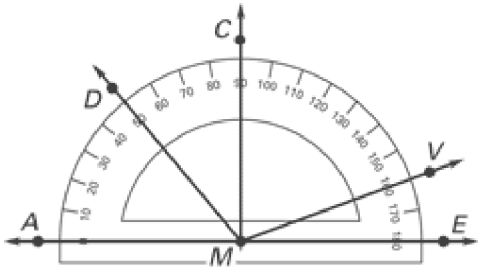


Solve for the variable using the given information.

4. Given: $GM = 28$; A is the midpoint of $\overline{GM}$.



Use the diagram to find the measure of the angle. State what type of angle is formed.



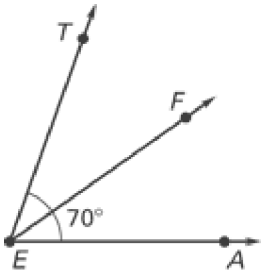
5. $\angle DMV$

6. $\angle AME$

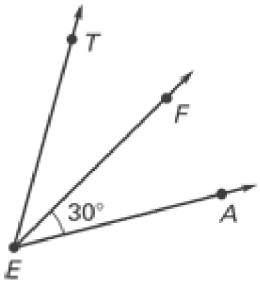
7. $\angle AMC$

Use the diagram where $\overrightarrow{EF}$ is the angle bisector of $\angle TEA$.

8. Given $m\angle TEA = 70°$, find $m\angle TEF$ and $m\angle FEA$.

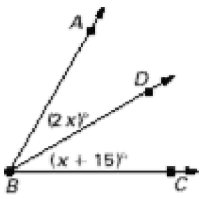


9. Given $m\angle FEA = 30°$, find $m\angle TEF$ and $m\angle TEA$.



Find the value of x.

10. $\overrightarrow{BD}$ bisects $\angle ABC$.



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11. $\angle A$ and $\angle B$ are supplementary. The measure of $\angle B$ is three times the measure of $\angle A$. Find $m\angle A$ and $m\angle B$.

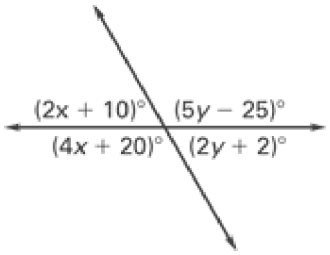
Find the area of the figure described. Round decimals to the nearest tenth.

12. Triangle with height 4 cm and base 5 cm

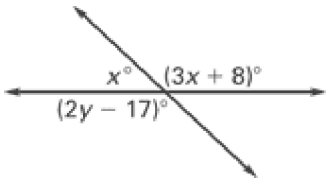
13. Circle with radius 5 yd (Use 3.14 for π)

Find the values of the variables.

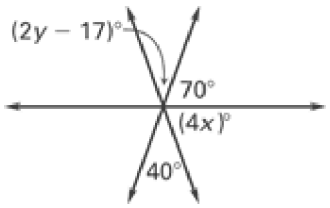
14.



15.



16.



17. $\angle$PMH=81° and $\angle$KMP are supplementary. What is the measure of $\angle$KMP? _____

18. $\angle$PMH=28° and $\angle$KMP are complementary. What is the measure of $\angle$KMP? _____

19. $\angle$QWT=(7x– 36)° and $\angle$MWZ=(5x+ 12)° are vertical angles. Find x and $\angle$MWQ.

Equation: _____
x = _____and $\angle$TWQ = _____

20. If $\angle$HMP=(–2x+ 11)° and $\angle$PMF=(–8x– 121)° are complemenatry, find the value of x, $\angle$HMP and $\angle$PMF.

Equation: _____

x = _____$\angle$HMP = _____ $\angle$PMF = _____

21. If Q,P,R are collinear with R between points Q and P along with QP = 14x + 3, QR = 13x - 19, and RP = 15x - 20, find the value of x and the measure of QR, RP, and QP.

x = _____ QR = _____
RP = _____ QP = ____

22. Find the midpoint of segment $\overline{ST}$ if $S(-20, -7)$ and $T(16, -13)$. Show your work.

23. If the midpoint of segment $\overline{ST}$ is (5, 3) and S is $S(17, -8)$, find the coordinates of point T. Show your work.

24. If W is in the interior of $\angle$TMQ and m$\angle$QMW = 78° and m$\angle$TMW = 85°, find m$\angle$TMQ.

Find m$\angle$TMQ = _____

25. If W is in the interior of m$\angle$TMQ, m$\angle$TMQ = 151° and m$\angle$QMW = 77°. Find m$\angle$TMW.

m$\angle$TMW = _____

26. Find the distance between the points (3, 1) and (–1, –2). Show all work.

Distance = _____

Chapter 1 Midterm Review
Answer Section

SHORT ANSWER

1. 85°
2. 152°
3. *A*, *E*, *B*
4. $x = 11$
5. 110°; obtuse angle
6. 180°; straight angle
7. 90°; right angle
8. $m\angle TEF = 35°$; $m\angle FEA = 35°$
9. $m\angle TEF = 30°$; $m\angle TEA = 60°$
10. 15
11. $m\angle A = 45°$; $m\angle B = 135°$
12. $10\,\text{cm}^2$
13. $78.5\,\text{yd}^2$
14. $x = 25$; $y = 29$
15. $x = 43$; $y = 77$
16. $x = 17.5$; $y = 28.5$
17. Supplementary $\angle KMP = 180° - 81° = 99°$
18. Complementary $\angle KMP = 90° - 28° = 62°$
19. Vertical Angles $(7x - 36)° = (5x + 12)°$ $x = 24°$ $\angle TWQ = 132°$
20. Right Angle $(-2x + 11)° + (-8x - 121)° = 90°$ $x = -20$ $\angle HMP = 51°$ and $\angle PMF = 39°$
21. If QP = 14x + 3, QR = 13x - 19, and RP = 15x - 20, find the value of x and the measure of QR, RP, and QP.

Equation: $(13x - 19) + (15x - 20) = 14x + 3$

$x = 3$ $QR = 20$ $RP = 25$ $QP = 45$

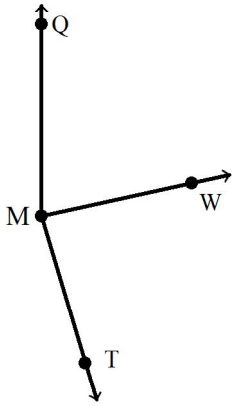
$13(3) + -19$ $15(3) + -20$ $14(3) + 3$

22. $\left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2}\right) = \left(\frac{-20 + 16}{2}, \frac{-7 + -13}{2}\right) = \left(\frac{-4}{2}, \frac{-20}{2}\right) = (-2, -10)$

23. $\left(\frac{x_1+x_2}{2}, \frac{y_1+y_2}{2}\right) = \left(\frac{17+-7}{2}, \frac{-8+14}{2}\right) = \left(\frac{10}{2}, \frac{6}{2}\right) = (5,3)$

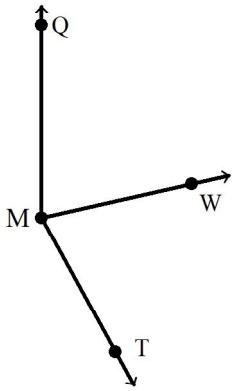
T(–7, 14)

24. If W is in the interior of ∠TMQ and m∠QMW = 78° and m∠TMW = 85°. Find m∠TMQ = _____



m∠TMQ = 78° + 85° = 163°

25. If W is in the interior of m∠TMQ, m∠TMQ = 151° and m∠QMW = 77°. Find m∠TMW.



m∠TMW = _____

m∠TMW = 151° – 77° = 74°.

26. 5 units