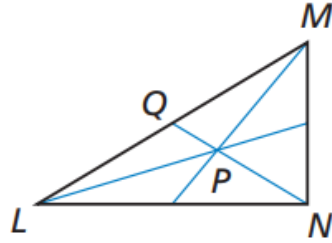


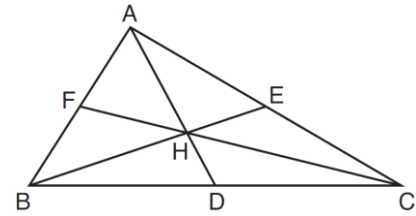
UNKNOWN ANGLES REVIEW #1

1. Point P is the centroid of $\triangle LMN$. If $QN = 42$, Find PN and QP.

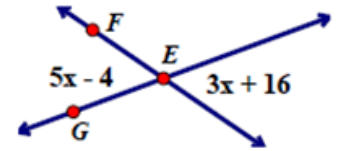


2. In $\triangle JKL$, $\overline{JL} \cong \overline{KL}$. If $m\angle J = 58$, what is $m\angle L$?

3. In the diagram below of $\triangle ABC$, point H is the intersection of the three medians. If \overline{DH} measures 2.4 centimeters, what is the length, in centimeters, of \overline{AD} ?



4. Solve for the x.

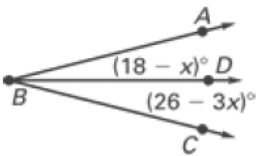


Reason: _____

5. If the measures, in degrees, of the three angles of a triangle are x , $x + 10$, and $2x - 6$, the triangle must be

- 1) isosceles
- 2) equilateral
- 3) right
- 4) scalene

6. If \overline{BD} bisects $\angle ABC$, determine the value of $\angle ABC$.

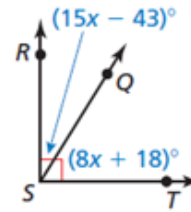


Reason: _____

7. In $\triangle FGH$, $m\angle F = m\angle H$, $GF = x + 40$, $HF = 3x - 20$, and $GH = 2x + 20$. The length of \overline{GH} is

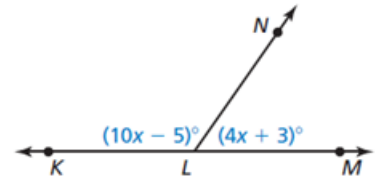
- 1) 20
- 2) 40
- 3) 60
- 4) 80

8. Find $m\angle RSQ$ and $m\angle TSQ$.



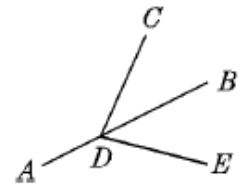
Reason: _____

9. Given that $\angle KLM$ is a straight angle, find $m\angle KLN$ and $m\angle NLM$.



Reason: _____

10. In the diagram, $m\angle CDE = 140$, and $\angle CDE$ is bisected by \overline{AB} . What is the measure of $\angle EDA$?

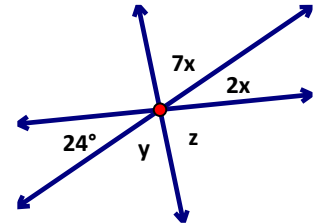


11. Solve for the missing values.

$x =$ _____

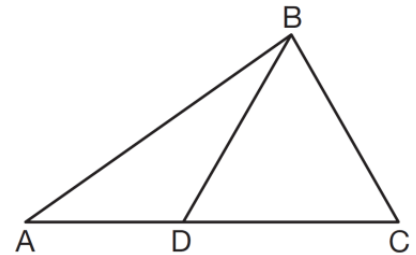
$y =$ _____

$z =$ _____

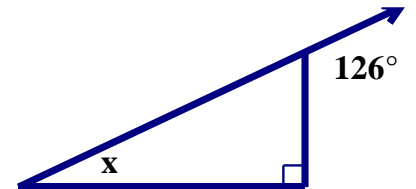


12. In the diagram of $\triangle ABC$ below, \overline{BD} is drawn to side \overline{AC} . If $m\angle A = 35$, $m\angle ABD = 25$, and $m\angle C = 60$, which type of triangle is $\triangle BCD$?

- 1) equilateral
- 2) scalene
- 3) obtuse
- 4) right

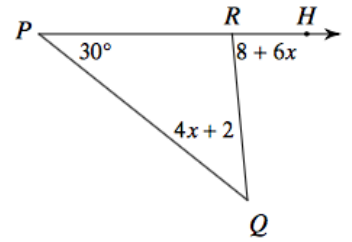


13. Solve for x .



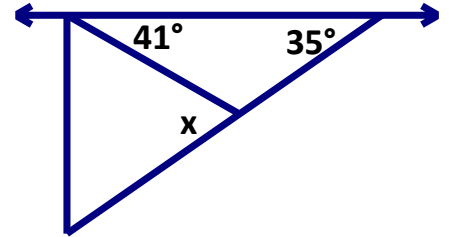
Reason: _____

14. What is the value of x ?



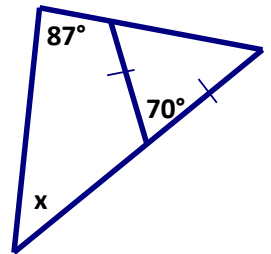
Reason: _____

15. Solve for x .



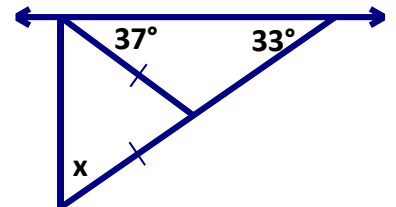
Reason: _____

16. Solve for x .



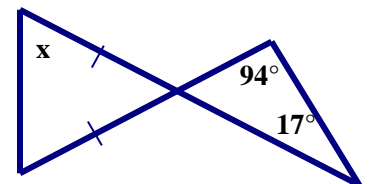
Reason: _____

17. Solve for x .



Reason: _____

18. Solve for x .



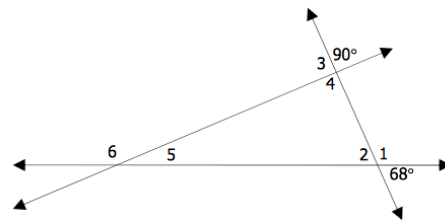
Reason: _____

19. Solve for the missing angles.

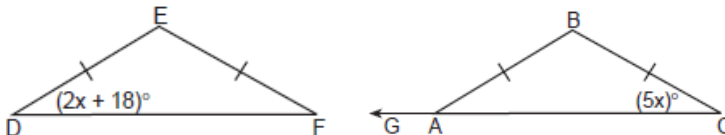
1 = _____ 4 = _____

2 = _____ 5 = _____

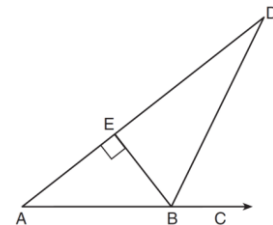
3 = _____ 6 = _____



20. In the accompanying diagram, isosceles $\triangle ABC \cong$ isosceles $\triangle DEF$, $m\angle C = 5x$, and $m\angle D = 2x + 18$. Find $m\angle B$ and $m\angle BAG$.



21. The diagram below shows $\triangle ABD$, with \overrightarrow{ABC} , $\overline{BE} \perp \overline{AD}$, and $\angle EBD \cong \angle CBD$. If $m\angle ABE = 52$, what is $m\angle D$?

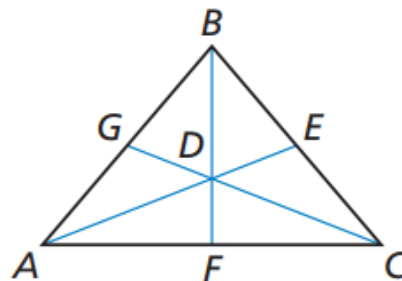


22. Point D is the centroid of $\triangle ABC$. Use the given information to find the value of x for each of the following:

I. $GD = 2x - 8$ and $GC = 3x + 3$

II. $AD = 5x$ and $DE = 3x - 2$

III. $DF = 4x - 1$ and $BD = 6x + 4$



23. In the diagram below of $\triangle GJK$, H is a point on \overline{GJ} , $\overline{HJ} \cong \overline{JK}$, $m\angle G = 28$, and $m\angle GJK = 70$. Determine whether $\triangle GHK$ is an isosceles triangle and justify your answer.

