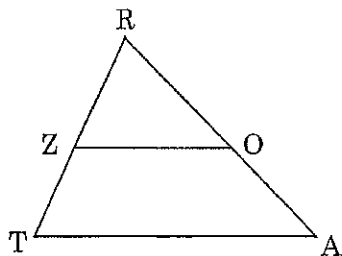
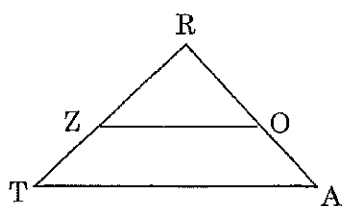


Quadratic Practice with Midsegments PAP Name _____

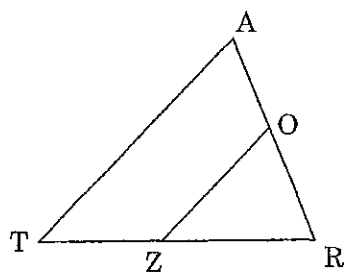
- 1) In $\triangle TRA$, \overline{ZO} is a midsegment. If $TA = 6x^2 + 3x - 2$ and $ZO = 2x^2 - x + 5$, then what is length of ZO .



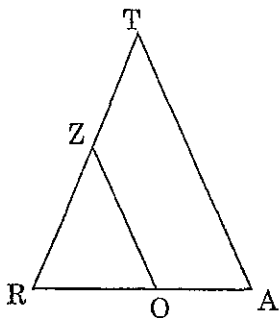
- 2) In $\triangle TRA$, \overline{ZO} is a midsegment. If $TA = 3x^2 - 3x - 42$ and $ZO = x^2 - 2x - 6$, then what is length of TA .



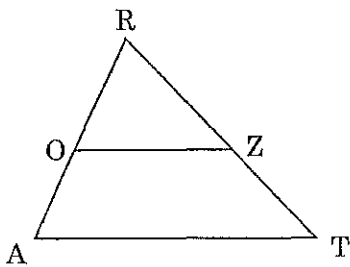
- 3) In $\triangle TRA$, \overline{ZO} is a midsegment. If $TA = 5x^2 - 6x - 8$ and $ZO = x^2 - 2x + 4$, then what is length of ZO .



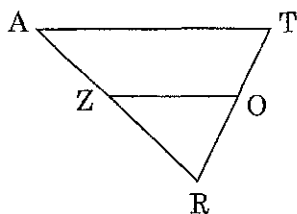
- 4) In $\triangle TRA$, \overline{ZO} is a midsegment. If $TA = 3x^2 + 4x - 10$ and $ZO = x^2 - x + 3$, then what is length of TA .



- 5) In $\triangle TRA$, \overline{ZO} is a midsegment. If $TA = 3x^2 + 14x - 44$ and $ZO = x^2 + 2x - 10$, then what is length of ZO .



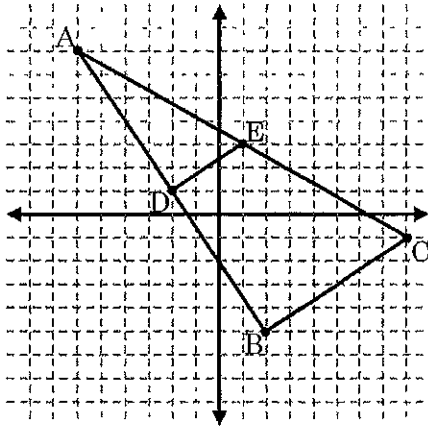
- 6) In $\triangle TRA$, \overline{ZO} is a midsegment. If $TA = 10x^2 + 2x - 5$ and $ZO = x^2 + 2x - 1$, then what is length of ZO .



ANSWERS 1) 41 or 8 2) 84 or 18 3) 12 or $\frac{9}{52}$ 4) 150 or 10 5) 110 6) 1 0625 as fraction $\left(\frac{17}{16}\right)$

Coordinate Geometry

15) Find the length of \overline{BC} if $\overline{BC} \parallel \overline{DE}$ and \overline{DE} is a midsegment of $\triangle ABC$.



\overline{CG} , \overline{EH} , and \overline{FJ} are midsegments of $\triangle ABD$, $\triangle GCD$, and $\triangle GHE$, respectively. Find each measure.

16) CG

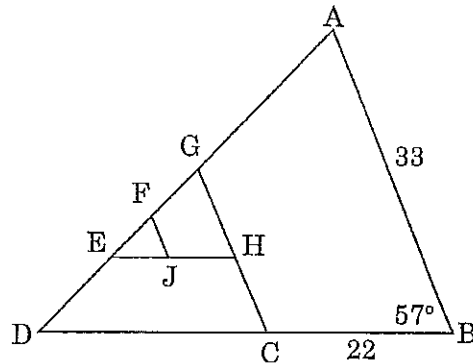
17) EH

18) FJ

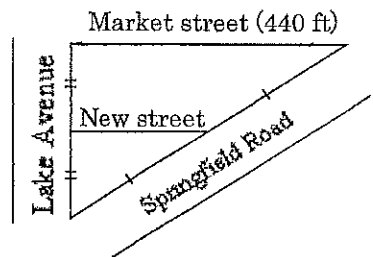
19) $m\angle DCG$

20) $m\angle GHE$

21) $m\angle FJH$

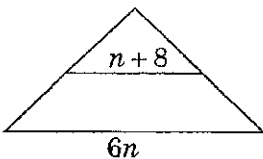


24) The diagram shows the sketch for a new street. Parallel parking spaces will be painted on both sides of the street. Each parallel parking space is 23 feet long. About how many parking spaces can the city accommodate on both sides of the new street? Explain your answer.

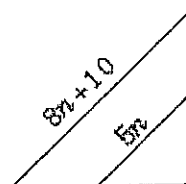


Find the value of n .

25)



26)



The lengths of two sides of a triangle are given (you may want to represent the third side with "x"). Write and solve an inequality to determine the possible lengths of the third side. Then write an inequality that represents the range of the possible values for the third side.

22) 3 and 5

23) 4 and 17

24) 10 and 15

25) 37 and 37

Use the figure at the right to answer questions 35-38. The $m\angle MTL = 2x^2 + 18$.

26) Name a median _____.

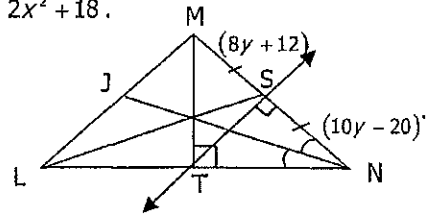
27) Name an altitude _____.

28) Name an angle bisector _____.

29) Name an perpendicular bisector _____.

30) $x =$ _____.

31) $y =$ _____.



32) Put the following sides in order from shortest to longest (it may help to draw a triangle).

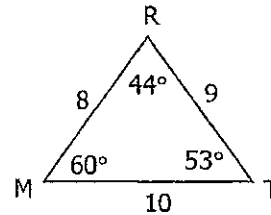
$m\angle A = 12x - 9$
 $m\angle B = 62 - 3x$
 $m\angle C = 16x + 2$

shortest side _____
 side _____
 longest side _____

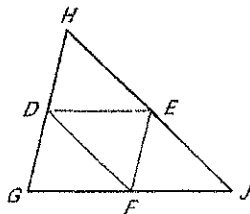
33) Use the figure at the right to answer questions.

What is wrong with the triangle?

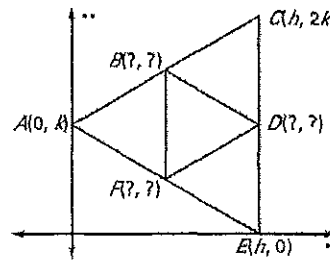
How can it be fixed by changing one thing? If so, then what?



34) If $HJ = 8x - 2$ and $DF = 2x + 11$, what is HJ ?



35) Find the missing points



36) In $\triangle TRA$, \overline{ZO} is a midsegment. If $TA = 5x^2 - 6x - 8$ and $ZO = x^2 - 2x + 4$, then what is length of ZO .

