Day 3 – 1.5 Homework

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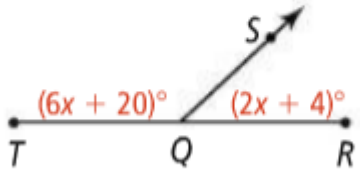
23. $\angle RQT$ is a straight angle.
What are $m\angle RQS$ and $m\angle TQS$?



$6x+20+2x+4=180$

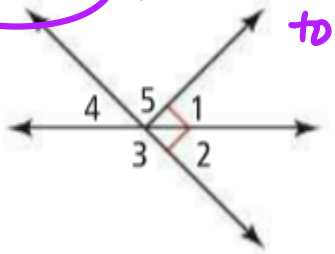
$8x=156$

$x=19.5$

$m\angle RQS=43°$

$m\angle TQS=137°$

Use the diagram at the right. Is each statement true? Explain. ← make sure to explain!



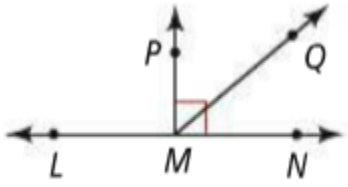
7. $\angle 1$ and $\angle 5$ are adjacent angles. yes/true

8. $\angle 3$ and $\angle 5$ are vertical angles. false

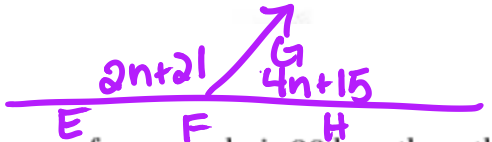
9. $\angle 3$ and $\angle 4$ are complementary. false

10. $\angle 1$ and $\angle 2$ are supplementary. false

24. Name two pairs of angles that form a linear pair in the diagram at the right. $\angle LMP$ & $\angle PMN$ or $\angle LMQ$ & $\angle QMN$



25. $\angle EFG$ and $\angle GFH$ are a linear pair, $m\angle EFG = 2n + 21$, and $m\angle GFH = 4n + 15$.
What are $m\angle EFG$ and $m\angle GFH$?



$2n+21+4n+15=180$

$6n=144$

$n=24$

$m\angle EFG=69°$

$m\angle GFH=111°$

32. The measure of one angle is 20 less than the measure of its complement.

$x=(90-x)-20$

$x=90-x-20$

$x=70-x$

$2x=70$

$x=35°$

complement = $55°$

37. **Algebra** $\angle RQS$ and $\angle TQS$ are a linear pair where $m\angle RQS = 2x + 4$ and $m\angle TQS = 6x + 20$.

a. Solve for x. $=19.5$

b. Find $m\angle RQS$ and $m\angle TQS$. $\angle RQS=43°$ $m\angle TQS=137°$

c. Show how you can check your answer. $43+137 \stackrel{?}{=} 180$? YES!

$2x+4+6x+20=180$

$8x+24=180$

$8x=156$

$x=19.5$