# Secondary Math II

Unit 5 – Similarity & Trigonometry

PRACTICE TEST

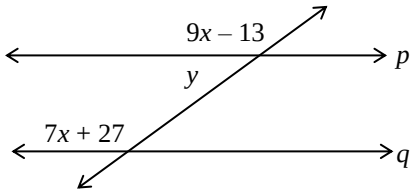
Name

(LESSON)

Use the figure below to find the values of $x$ and $y$ so that $p \parallel q$.

1. $x$ = ? (5-1)

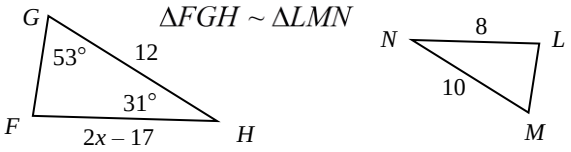
2. $y$ = ? (5-1)




Use the figure below to find the following two values.

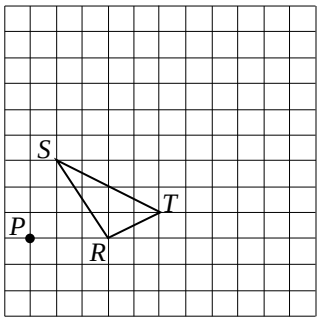
3. $m\angle L$ = ? (5-2)

4. $x$ = ? (5-2)




Use for questions 3 & 4.

5. Perform a dilation of $\Delta RST$ with center at $P$ and a scale factor of 2. (5-3)




6. For a dilation in the coordinated plane, centered at (0, 0), $\Delta ABC$ is the preimage, and $\Delta A'B'C'$ is the image with a scale factor of 3. Label each statement below as true or false. (5-3)
(No part of the $\Delta ABC$ passes through the origin.)

A. $\overline{AB} \parallel \overline{A'B'}$

B. $\Delta ABC \sim \Delta A'B'C'$

C. $\overline{CA} \cong \overline{C'A'}$

D. $\Delta ABC \cong \Delta A'B'C'$

E. $B'C' = 3BC$

F. $3A'C' = 3AC$

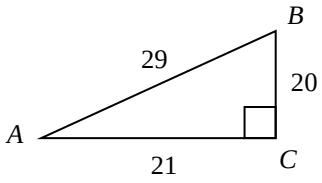
7. What value would correctly fill in the blank? $\cos 75^\circ = \sin$ _____ (5-4)

Use the triangle to determine the values for the trigonometric functions below.

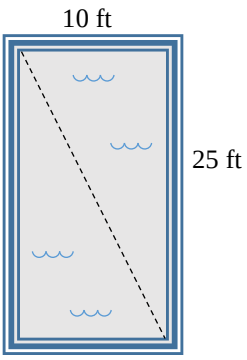
8. $\sin A$ = ? (5-4)

9. $\cos A$ = ? (5-4)

10. $\tan A$ = ? (5-4)



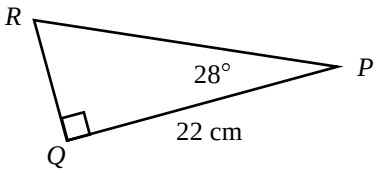
Felix has a rectangular swimming pool with dimensions 25 ft. x 10 ft.




11. How far will Felix swim if he swims diagonally from corner to opposite corner? (5-5)

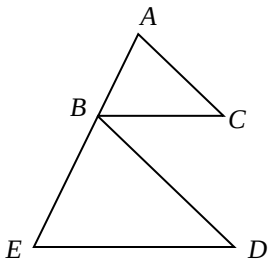
12. What is the angle formed between Felix's swim path and the 25 ft. side? (5-5)

13. Solve the triangle. (5-5)



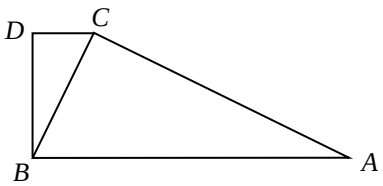

**One of the following proofs will be on the test. Make sure you know how to do them both.**

14. Given: $\overline{BC} \parallel \overline{ED}$ and $\angle C \cong \angle D$
Prove that $\Delta ABC \sim \Delta BED$




| Statements | Reasons |
|---|---|
| | |

15. Given: $\overline{DC} \parallel \overline{AB}$ and $\angle DBC \cong \angle A$
Prove that $\Delta ABC \sim \Delta BCD$




| Statements | Reasons |
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