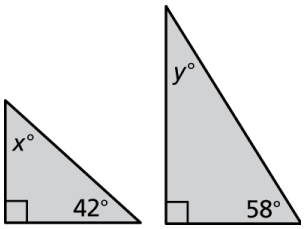
Name_____ Date_____

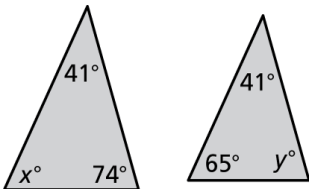
3.4 – Using Similar Triangles

Tell whether the triangles are similar. Explain.

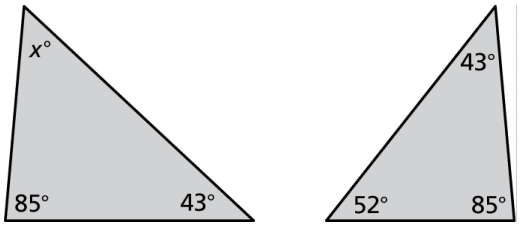
1)



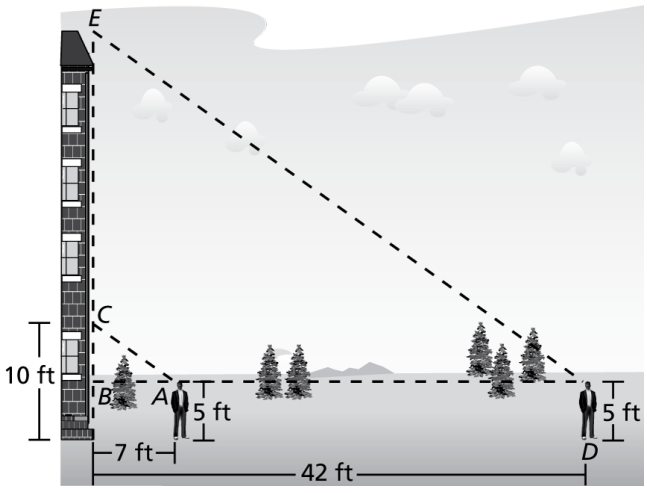
2)



3) The triangles are similar. Find the value of x.



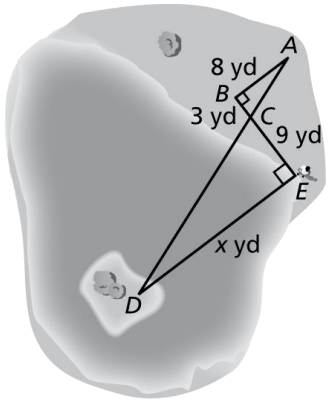
4) You can use indirect measurement to estimate the height of a building. First measure your distance from the base of the building and the distance from the ground to a point on the building that you are looking at. Maintaining the same angle of sight, move back until the top of the building is in your line of sight.



a) Explain why $\triangle ABC$ and $\triangle DBE$ are similar.

b) What is the height of the building?

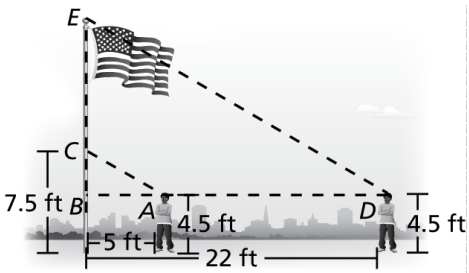
5) You and your friend are practicing for a rowing competition and want to know how far it is to an island in the Indian River Lagoon. You take measurements on your side of the lagoon and make the drawing shown.



a) Explain why $\triangle ABC$ and $\triangle DBE$ are similar.

b) What is the distance to the island?

6) You can use indirect measurement to estimate the height of a flag pole. First measure your distance from the base of the flag pole and the distance from the ground to a point on the flag pole that you are looking at. Maintaining the same angle of sight, move back until the top of the flag pole is in your line of sight.



a) Explain why $\triangle ABC$ and $\triangle DBE$ are similar.

b) What is the height of the flag pole?

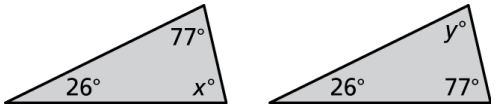
PUZZLE TIME!!!!

What Do You Call A Dandelion Floating In The Ocean?

Write the letter of each answer in the BOX BELOW containing the exercise number.

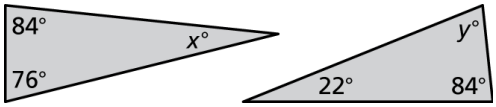
Choose the correct letter that describes the triangles.

1.



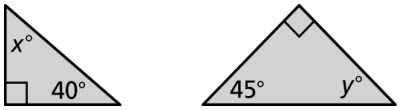
A. similar **B. not similar**

2.



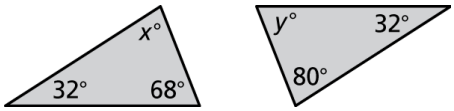
C. similar **D. not similar**

3.



E. similar **F. not similar**

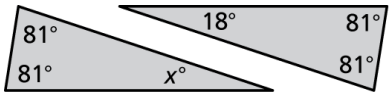
4.



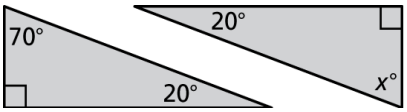
G. similar **H. not similar**

The triangles are similar. Find the value of *x*.

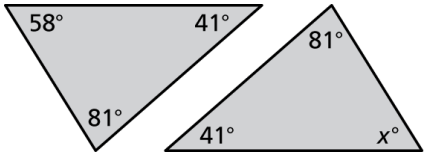
5.



6.



7.



Answers

R. B

A. D

T. H

E. 58

D. A

M. E

S. G

E. 18

W. 70

N. C

E. F

4	7	2		6	5	3	1