

Warm up

A flagpole casts a 8 m shadow and a 1.6 m tall man casts a shadow of 1 m.

a) Sketch a diagram of the above situation. Label the vertices with capital letters. (2)

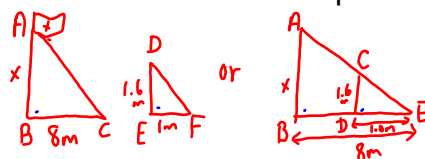
b) Prove that the two triangles in the diagram in part (a) are **SIMILAR**. (4)

c) Determine the height of the flagpole in the above situation. (2)

answers

A flagpole casts a 8 m shadow and a 1.6 m tall man casts a shadow of 1 m.

a) Sketch a diagram of the above situation. Label the vertices with capital letters. (2)



b) Prove that the two triangles in the diagram in part (a) are **SIMILAR**. (4)

$\angle B = \angle E$ gravity 90° $\angle C = \angle F$ sun's rays $\angle A = \angle D$ SATT $\therefore \triangle ABC \sim \triangle DEF$ AAA	$\angle B = \angle CDE$ gravity 90° $\angle E = \angle E$ Shared $\angle A = \angle DCE$ SATT $\therefore \triangle ABE \sim \triangle CDE$ AAA
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c) Determine the height of the flagpole in the above situation. (2)

$$\frac{x}{1.6} = \frac{8}{1}$$

$$x = \frac{8(1.6)}{1}$$

$$= 12.8\text{m}$$

Questions from the homework?

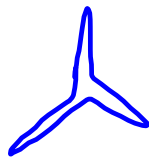
Chapter Review & Test for Practice

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Page 380 1,2 and 4

14. page 379

a) order 3



b) order 2

c) order 6

d) order 8

Test tomorrow:

Finish Chapter Review & Test for Practice
Page 377-379 3, 6-12, 14, 15 and 17

Page 380 1,2 and 4

Worksheet

solutions:

1. $\triangle BCD \approx \triangle ACE$ $\frac{BC}{AC} = \frac{CD}{CE} = \frac{BD}{AE}$ 2. 3.9, 3. 15, 4. 18, 5. 18,
6. 4, 7. 16, 8. 1.5, 9. 24, 10. 12, 11. 44, 12. 29.3, 13. 70
14. 28, 15. 51, 16. 50, 17. 18, 18. 3.4, 19. 8, 20. 9