Din: Simplify the fractions below: (calculator – math enter enter)

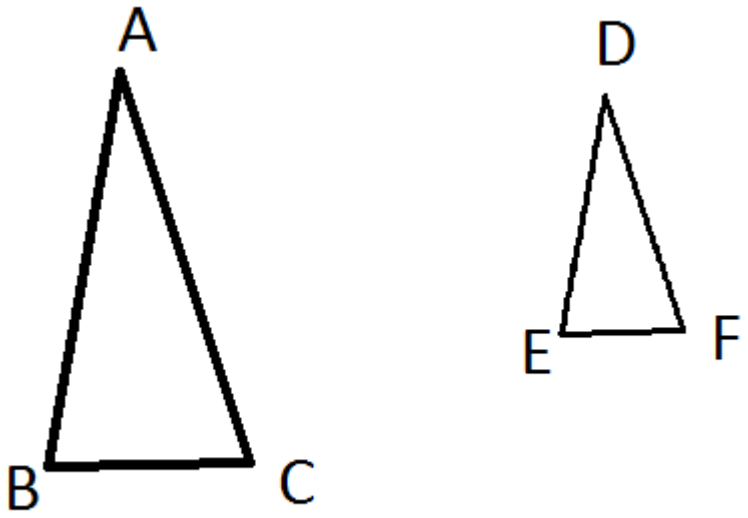
$\frac{4}{8}$	$\frac{2}{4}$	$\frac{6}{3}$	$\frac{-10}{2}$
$\frac{3}{3}$	$\frac{-2}{2}$	$\frac{-3}{27}$	$\frac{5}{25}$
$\frac{9}{18}$	$\frac{4}{16}$	$\frac{9}{81}$	$\frac{40}{24}$
$\frac{4}{24}$	$\frac{-2}{-8}$	$\frac{4}{6}$	$\frac{20}{4}$

Din: Simplify the fractions below: (calculator – math enter enter)

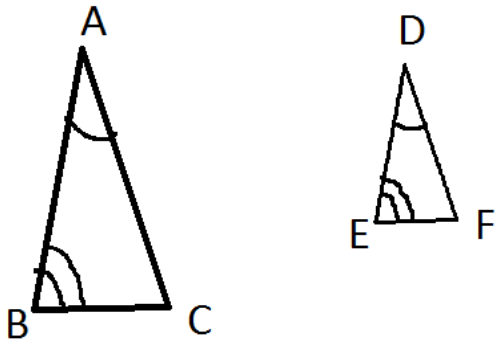
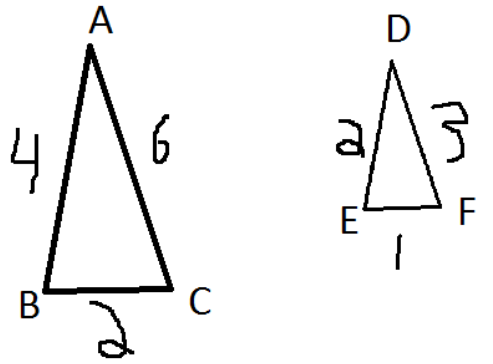
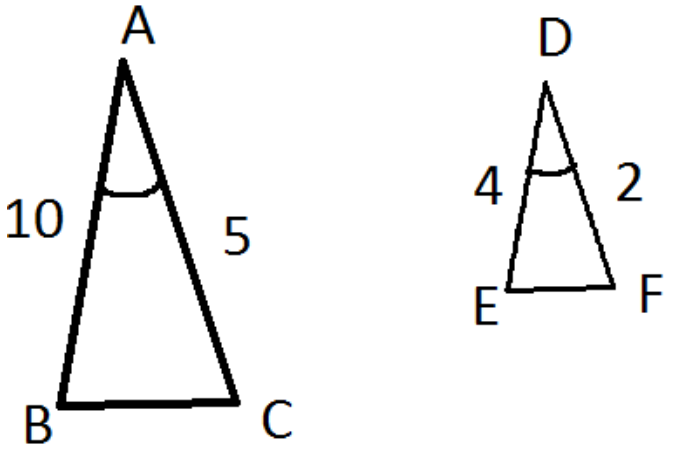
$\frac{4}{8}$	$\frac{2}{4}$	$\frac{6}{3}$	$\frac{-10}{2}$
$\frac{3}{3}$	$\frac{-2}{2}$	$\frac{-3}{27}$	$\frac{5}{25}$
$\frac{9}{18}$	$\frac{4}{16}$	$\frac{9}{81}$	$\frac{40}{24}$
$\frac{4}{24}$	$\frac{-2}{-8}$	$\frac{4}{6}$	$\frac{20}{4}$

Goal:

$\Delta ABC \sim \Delta DEF$ with $AB = 10$, $DE = 5$, $AC = 8$, $DF = 4$, $BC = 4$, $EF = 3$.

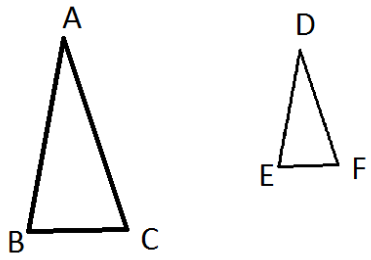


Ways we can prove triangles are similar

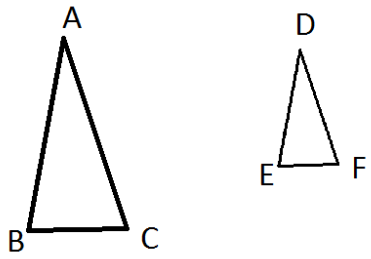
Way	Picture	Math to show
		
		
		

Note: What does not work???

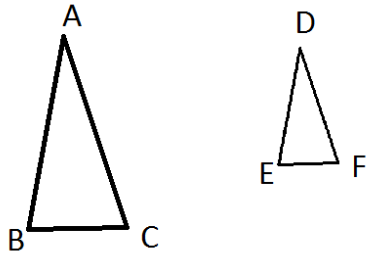
1. Given ΔABC and ΔDEF, $AB = 14$, $AC = 12$, $BC = 10$, $DE = 7$, $DF = 6$, and $EF = 5$. Are the two triangles similar? Justify.



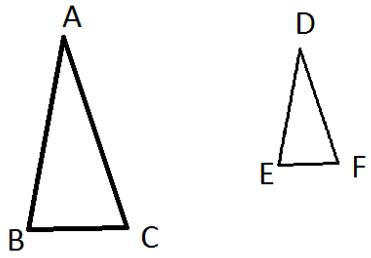
2. Given ΔABC and ΔDEF, $AB = 4$, $AC = 6$, $BC = 9$, $DE = 2$, $DF = 3$, and $EF = 4$. Are the two triangles similar? Justify.



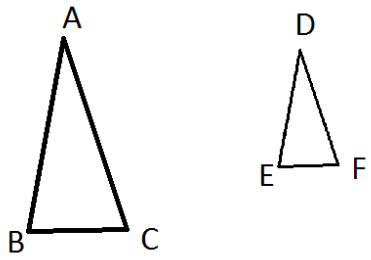
3. Given ΔABC and ΔDEF, $AB = 20$, $AC = 15$, $BC = 10$, $DE = 4$, $DF = 3$, and $EF = 2$. Are the two triangles similar? Justify.



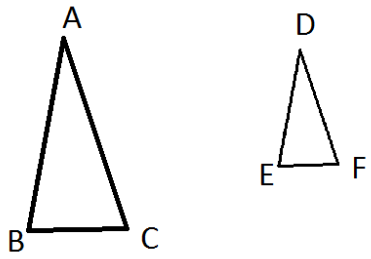
4. Given ΔABC and ΔDEF, $AB = 30$, $AC = 24$, $BC = 21$, $DE = 10$, $DF = 8$, and $EF = 8$. Are the two triangles similar? Justify.



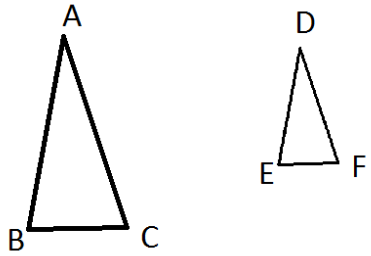
5. Given ΔABC and ΔDEF, AB = 5, AC = 12, BC = 15, DE = 1, DF = 2, and EF = 3 Are the two triangles similar? Justify.



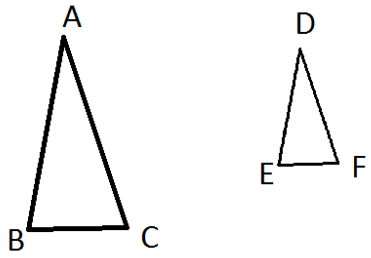
6. Given ΔABC and ΔDEF, AB = 21, AC = 14, BC = 35, DE = 3, DF = 2, and EF = 5. Are the two triangles similar? Justify.



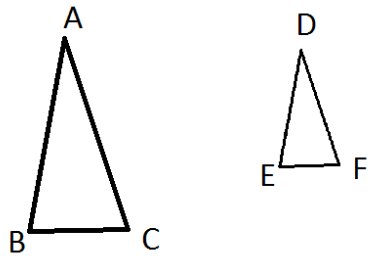
7. Given ΔABC and ΔDEF, AB = 6, AC = 7, BC = 10, DE = 2, DF = 3, and EF = 4. Are the two triangles similar? Justify.



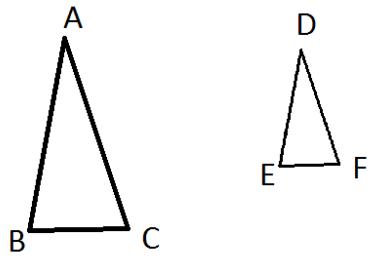
8. **Given** ΔABC and ΔDEF, AB = 9, AC = 12, BC = 15, DE = 6, DF = 4, and EF = 10. Are the two triangles similar? Justify.



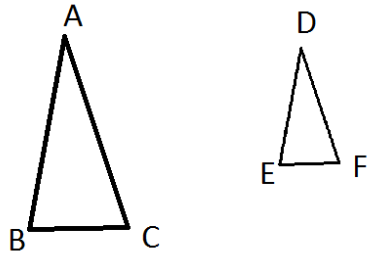
9. Given ΔABC and ΔDEF, $AB = 14$, $AC = 12$, $DE = 7$, $DF = 6$, and $\angle A \cong \angle D$. Are the two triangles similar? Justify.



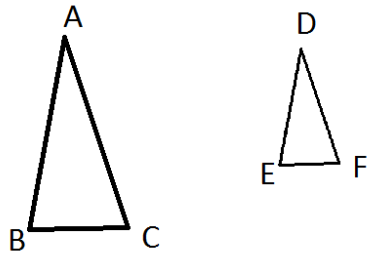
10. Given ΔABC and ΔDEF, $AB = 10$, $AC = 8$, $DE = 5$, $DF = 4$, and $\angle B \cong \angle E$. Are the two triangles similar? Justify.



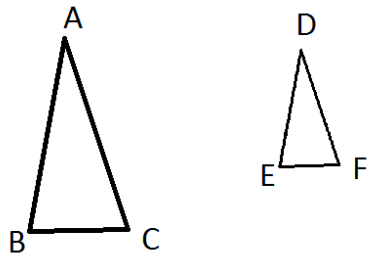
11. Given ΔABC and ΔDEF, $AB = 14$, $AC = 12$, $DE = 7$, $DF = 5$, and $\angle A \cong \angle D$. Are the two triangles similar? Justify.



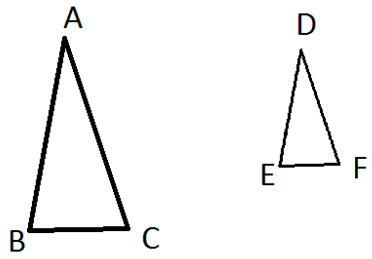
12. Given ΔABC and ΔDEF, $BC = 20$, $BA = 12$, $DE = 6$, $EF = 10$, and $\angle B \cong \angle E$. Are the two triangles similar? Justify.



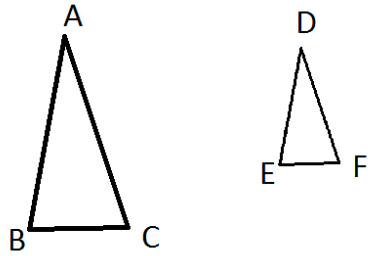
13. Given ΔABC and ΔDEF, $AB = 9$, $AC = 15$, $DE = 3$, $DF = 5$, and $\angle A \cong \angle D$. Are the two triangles similar? Justify.



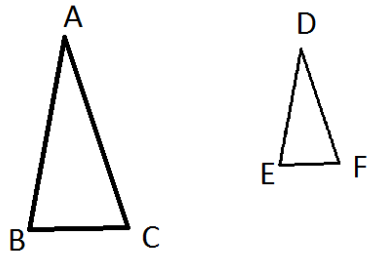
14. Given ΔABC and ΔDEF, $AB = 10$, $AC = 8$, $DE = 5$, $DF = 4$, and $\angle C \cong \angle F$. Are the two triangles similar? Justify.



15. Given ΔABC and ΔDEF, $AB = 10$, $AC = 11$, $DE = 5$, $DF = 6$, and $\angle A \cong \angle D$. Are the two triangles similar? Justify.



16. Given ΔABC and ΔDEF, $BC = 10$, $BA = 20$, $DE = 10$, $EF = 5$, and $\angle B \cong \angle E$. Are the two triangles similar? Justify.



Challenge: You need to draw the picture!!!

17. Given the information about ΔABC and ΔDEF, $BC = 10$, $BA = 20$, $DE = 10$, $EF = 5$, and $\angle B \cong \angle E$. Are the two triangles similar? Justify.

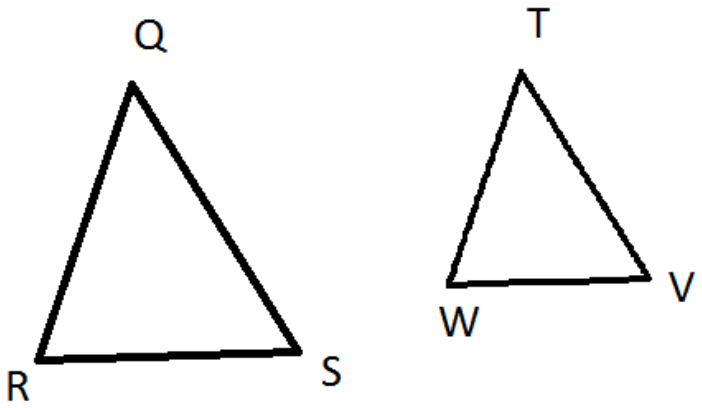
18. Given the information about ΔQRT and ΔDEF, $RC = 10$, $RQ = 20$, $DE = 10$, $EF = 5$, and $\angle R \cong \angle E$. Are the two triangles similar? Justify.

19. Given the information about ΔABC and ΔLMO, $BC = 10$, $BA = 20$, $LM = 10$, $MO = 5$, and $\angle B \cong \angle M$. Are the two triangles similar? Justify.

20. Given the information about ΔTVW and ΔDEF, $VW = 10$, $VT = 20$, $DE = 10$, $EF = 5$, and $\angle V \cong \angle E$. Are the two triangles similar? Justify.

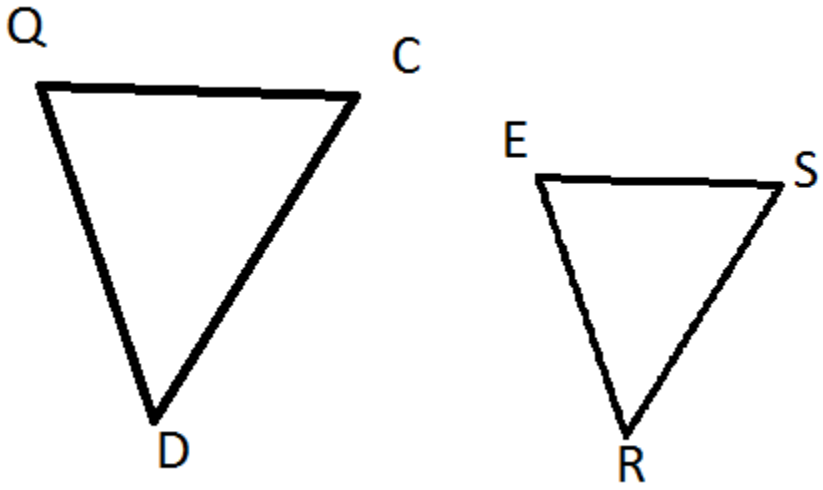
Exit Ticket

1) Given ΔQRS and ΔTWV, QR = 15, RS = 10, SQ = 5, TW = 3, WV = 2, and TV = 1. Are the two triangles similar? Justify.



‘

2) Given ΔQCD and ΔESR, QC = 20, ES = 10, QD = 8, ER = 4, and ∠D ≅ ∠R. Are the triangles similar? Justify.



3) After a translation up 5 and down 3, are ΔABC and ΔDEF congruent to each other? Explain.