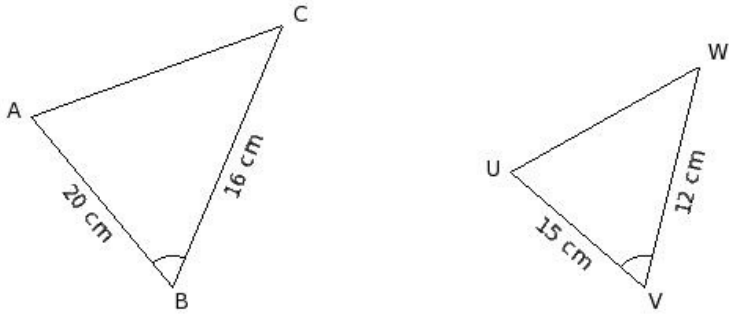
EduSahara™ Assignment

Name : Similarity of Triangles

Chapter : Similarity

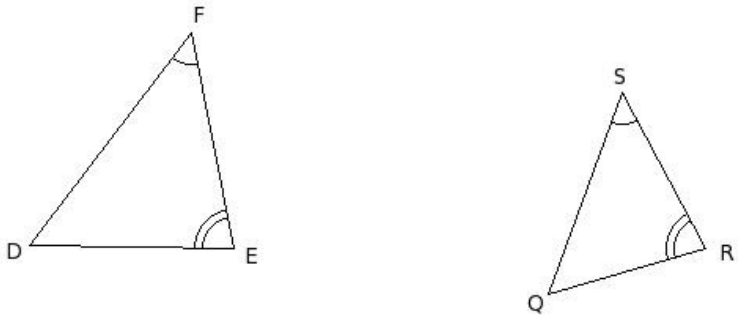
Grade : ICSE Grade IX

1. Identify the property by which the two given triangles are similar



(i) not similar (ii) AAA Similarity (iii) SAS Similarity (iv) SSS Similarity

2. Identify the property by which the two given triangles are similar



(i) SAS Similarity (ii) not similar (iii) AAA Similarity (iv) SSS Similarity

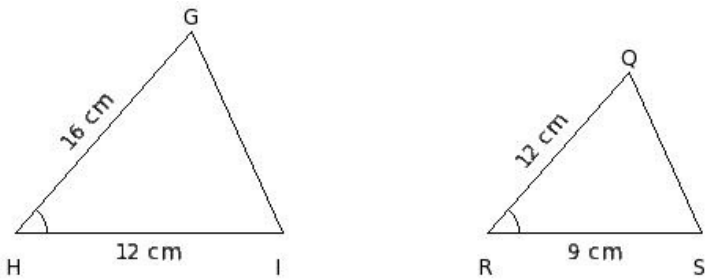
3. Identify the property by which the two given triangles are similar

(i) AAA Similarity (ii) SAS Similarity (iii) not similar (iv) SSS Similarity

In the given figure, $\triangle GHI$ and $\triangle QRS$ are such that

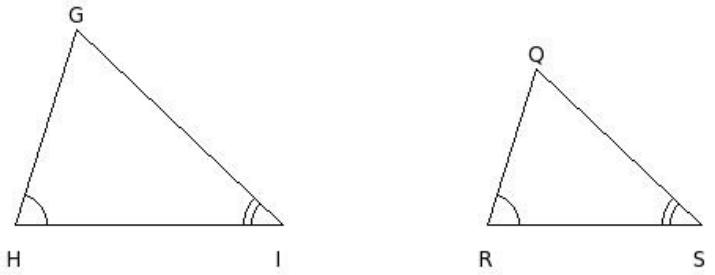
4. $\angle H = \angle R$ and $\frac{GH}{QR} = \frac{HI}{RS}$.

Identify the property by which the two triangles are similar



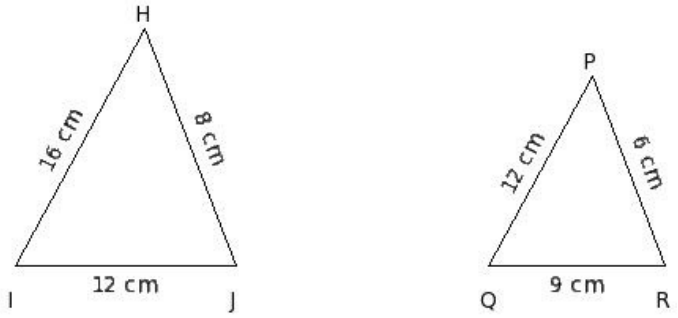
(i) not similar (ii) SAS Similarity (iii) AAA Similarity (iv) SSS Similarity

5. In the given figure, △GHI and △QRS are such that
$\angle H = \angle R$ and $\angle I = \angle S$.
Identify the property by which the two triangles are similar



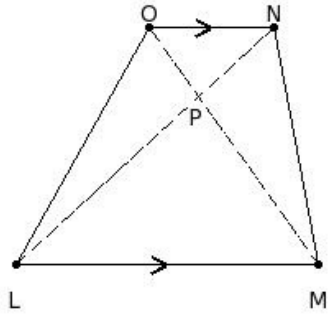
(i) SAS Similarity (ii) SSS Similarity (iii) not similar (iv) AAA Similarity

6. In the given figure, △HIJ and △PQR are such that
$\frac{HI}{PQ} = \frac{IJ}{QR} = \frac{JH}{RP}$.
Identify the property by which the two triangles are similar



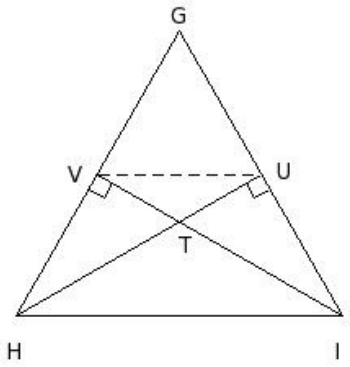
(i) AAA Similarity (ii) not similar (iii) SAS Similarity (iv) SSS Similarity

7. In the given figure, LMNO is a trapezium in which
LM ∥ NO and the diagonals MO and LN intersect at P. △PLM ~



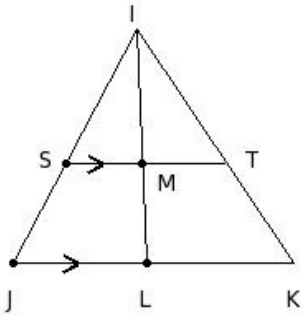
(i) △MNO (ii) △PNO (iii) △OLM (iv) △PMN (v) △POL

8. In the given figure, the altitudes UH and IV of △GHI meet at T. △UIT ~



(i) △TVU (ii) △VHI (iii) △UIH (iv) △THI (v) △VHT

9. In the given figure, ST ∥ JK , and median IL bisects ST. △ISM ~



(i) △IJL (ii) △JKI (iii) △IJK (iv) △ILK (v) △IMT

10. Which of the following are true?

a) Any two triangles are similar.
b) Any two triangles are congruent.
c) Any two squares are similar.
d) Any two circles are congruent.
e) Any two circles are similar.
f) Any two squares are congruent.

(i) {c,e} (ii) {d,f,c} (iii) {a,e,c} (iv) {b,e} (v) {a,c}

11. Which of the following are true?

a) A triangle is a polygonal region.
b) A sector is a polygonal region.
c) A circle is a polygonal region.
d) A semi-circle is a polygonal region.
e) A square is a polygonal region.

(i) {d,b,a} (ii) {b,a} (iii) {c,e,a} (iv) {c,e} (v) {a,e}

12. Which of the following are true?

a) If two figures are similar, then they are congruent too.
b) Similar figures have same area.
c) If two figures are congruent, then they are similar too.
d) Similar and congruent are not synonymous.
e) Congruent figures have same area.

(i) {c,d,e} (ii) {a,c,d} (iii) {a,c} (iv) {a,b,e} (v) {b,d}

13. Which of the following are true?

a) Area of a convex polygonal region is equal to the sum of the areas of all triangles formed by joining the vertices of the polygon with an interior point.
b) A polygonal region can be divided into a finite number of triangles in a unique way.
c) Area of the union of two polygonal region is the sum of the individual area.
d) Area of the union of two polygonal region is not equal to the sum of the individual area.

(i) {c,d} (ii) {b,c,a} (iii) {b,d,a} (iv) {b,a} (v) {a,d}

14. Which of the following are necessary conditions for similarity of two polygons ?

a) The corresponding sides are equal.
b) The corresponding angles are equal.
c) The corresponding sides are proportional.
d) The corresponding angles are proportional.

(i) {a,c,b} (ii) {b,c} (iii) {a,d,b} (iv) {a,b} (v) {d,c}

15. Which of the following are true?

a) Similarity is reflexive.
b) Similarity is symmetric.
c) Similarity is anti symmetric.
d) Similarity is transitive.

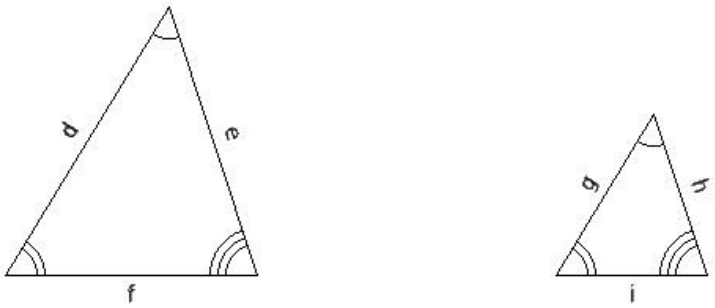
(i) {c,d} (ii) {a,b,d} (iii) {c,a,b} (iv) {c,b} (v) {c,a}

16. Which of the following are true?

a) Any two quadrilaterals are similar if the corresponding sides are proportional.
b) Any two quadrilaterals are similar if the corresponding angles are equal.
c) Any two triangles are similar if the corresponding angles are equal.
d) Any two triangles are similar if the corresponding sides are proportional.

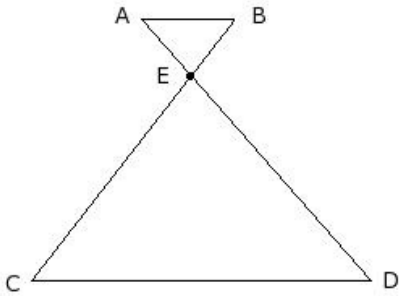
(i) {b,c} (ii) {b,d} (iii) {a,c,d} (iv) {b,a} (v) {b,a,c}

17. In the given two similar triangles, if d = 20 cm, e = 18 cm, f = 16 cm, g = 12 cm, find h



(i) 10.80 cm (ii) 12.80 cm (iii) 9.80 cm (iv) 11.80 cm (v) 8.80 cm

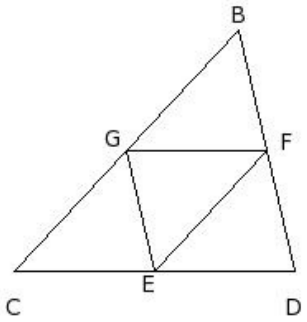
18. In the given figure, if AB ∥ CD then



(i) △ABE ~ △EDC (ii) △EBA ~ △EDC (iii) △ABE ~ △ECD (iv) △ABE ~ △DCE (v) △EAB ~ △ECD

19. In the given figure, points E , F and G are the mid-points of sides CD, DB and BC of △BCD. Which of the following are true?

a) △EGF ~ △BCD
b) △EFG ~ △BCD
c) △GCE ~ △BCD
d) △BGF ~ △BCD
e) △FED ~ △BCD



(i) {a,e,b} (ii) {a,b} (iii) {a,c} (iv) {b,c,d,e} (v) {a,d}

Assignment Key

1) (iii)	2) (iii)	3) (iv)	4) (ii)	5) (iv)	6) (iv)
7) (ii)	8) (v)	9) (i)	10) (i)	11) (v)	12) (i)
13) (v)	14) (ii)	15) (ii)	16) (iii)	17) (i)	18) (iv)
19) (iv)					