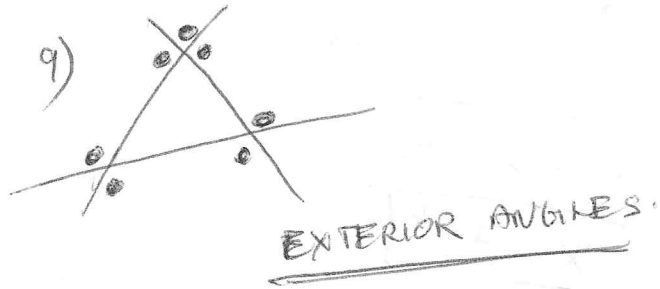
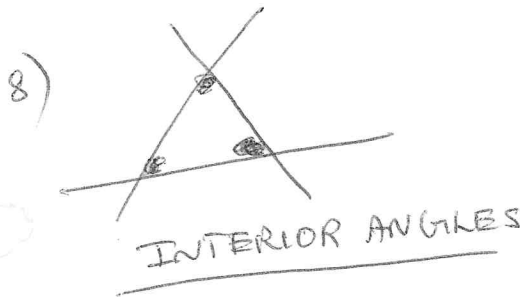
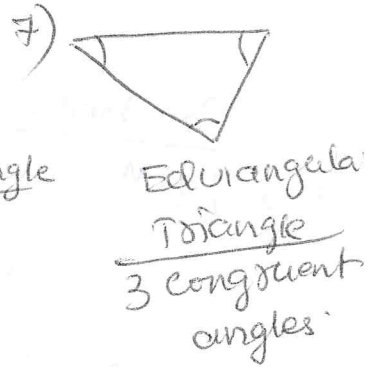
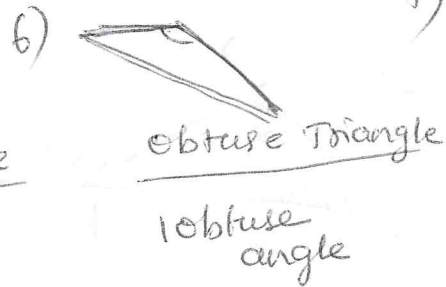
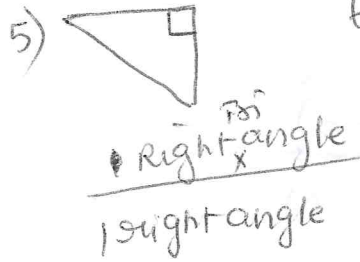
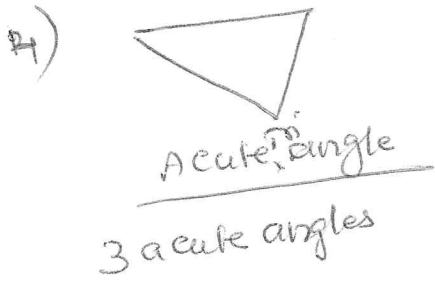
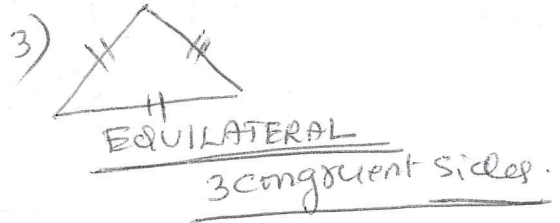
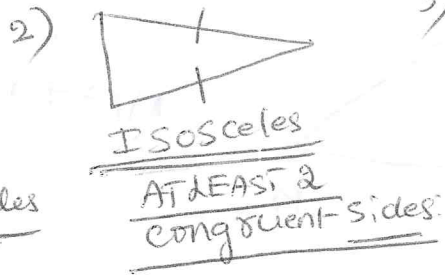


Chapter 4 Congruent Triangles

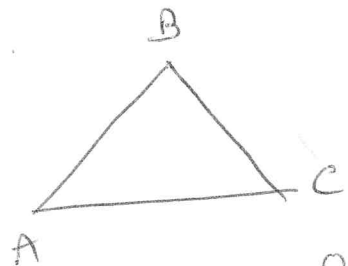
Date	Section Topic	Page and #	Worksheet/ Quiz
1. _____	4.1 Triangle Sum. Exterior Angle P218 Ex 2 and 3	P221 #1-26,33,34 Discuss #11,12,13	
2. _____	4.2 Congruent Triangles (Order) P226 Ex 2 and 4	P229 #16*,19,20* P231 #34	
3. _____	4.3 S.S.S. Side,Side,Side P234 Ex 1	P236 #6	Practice 4.3 Quiz 1
4. _____	4.4 S.A.S Side,Angle,Side H.L. Hypotenuse, Length P240 Ex1 and 2	P243 #9-14 21,22 Discuss	Practice 4.4
5. _____	4.5 A.S.A. Angle,Side,Angle A.A.S. Angle, Angle,(Corresponding Side) P249 Ex2	P253 #11,12,19 Discuss	
6. _____	4.6 Use Congruent Triangles P257 Ex2, and 3	P260 #15,16,37 Discuss P259 #3-8 P263 #1-6	Practice 4.5-4.6 Quiz 2
7. _____	4.7 Isosceles & Equilateral Triangles P264 Ex 1, P265 Ex Proof	P267 #11-13,17,20,*22 P268 #21,32	
8. _____	4.8 Congruent Transformations Reflect about x-axis Reflect about y-axis	P276 #3-5 P276 #12-18 Explain P279 #1-7	Practice 4.7-4.8 Quiz 3
9. _____	Review	P282 #6-15 P286 #1-15 P902-903 Check	
10. _____	Chapter 4 Test		Chapter 4 TEST

TRIANGLE SUM PROPERTIES:-

4.1



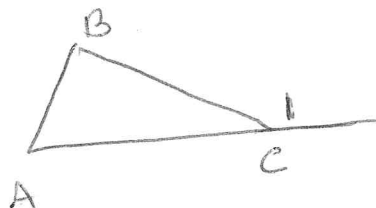
10) TRIANGLE SUM THEOREM:- The sum of the measures of the interior angles of a triangle is 180° .



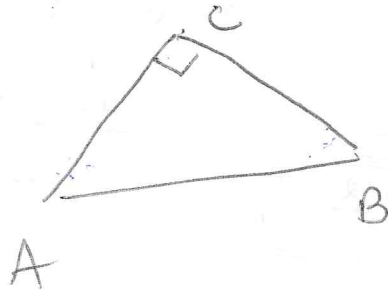
$$\angle A + \angle B + \angle C = 180^\circ$$

11) EXTERIOR ANGLE THEOREM:- THE MEASURE OF AN EXTERIOR ANGLE OF A TRIANGLE IS EQUAL TO THE SUM OF THE MEASURES OF THE TWO NON ADJACENT INTERIOR ANGLES.

$$\angle I = \angle A + \angle B$$

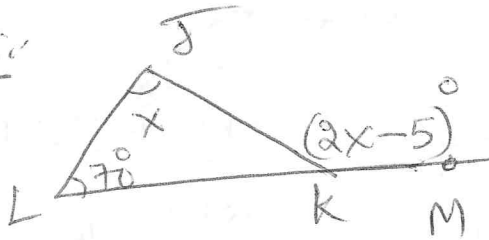


12) THE Acute angles of a right triangle are Complementary



$$m\angle A + m\angle B = 90^\circ$$

PROBLEMS:
Find $\angle JKM$



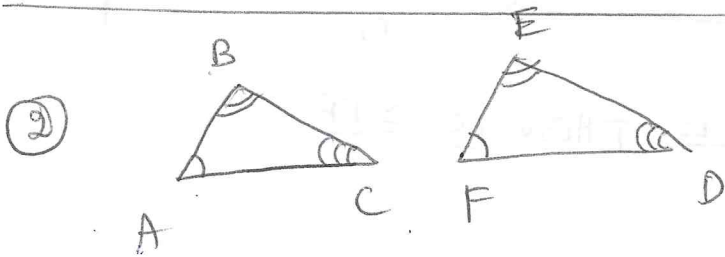
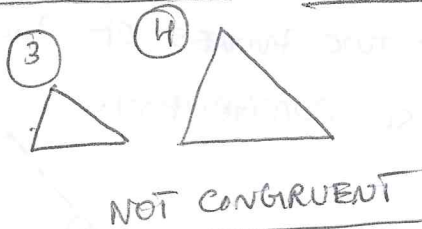
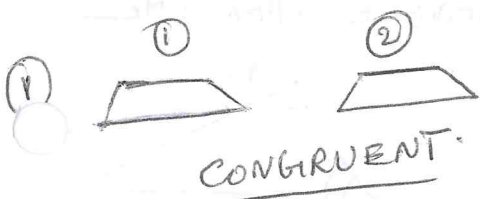
$$\begin{array}{r} (2x-5)^\circ = 70 + x^\circ \\ -x \qquad \qquad -x \\ \hline \end{array}$$

$$x - 5 = 70$$

$$\boxed{x = 75^\circ}$$

$$\angle JKM = (2x-5)^\circ = 2 \cdot 75^\circ - 5 = 145^\circ$$

4.2. CONGRUENCE AND TRIANGLES

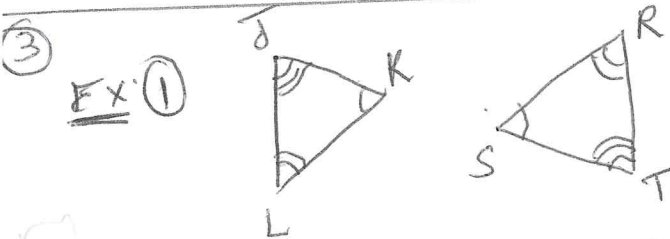


$\Delta ABC \cong \Delta FED$

CORRESPONDING ANGLES:

CORRESPONDING SIDES:

$\angle A \cong \angle F$; $\angle B \cong \angle E$; $\angle C \cong \angle D$
 $\overline{AB} \cong \overline{FE}$; $\overline{BC} \cong \overline{ED}$; $\overline{AC} \cong \overline{FD}$



WRITE CONGRUENCE STATEMENT: Identify all pairs of CONGRUENT CORRESPONDING PARTS:-

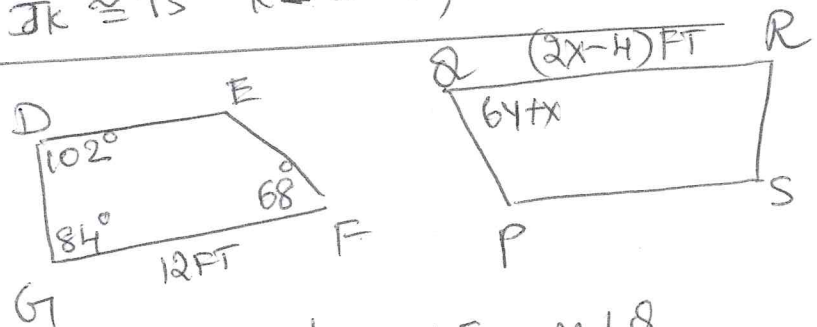
$\Delta JKL \cong \Delta TSR$

CORRESPONDING ANGLES:-

CORRESPONDING SIDES:-

$\angle J \cong \angle T$; $\angle K \cong \angle S$; $\angle L \cong \angle R$
 $\overline{JK} \cong \overline{TS}$; $\overline{KL} \cong \overline{SR}$; $\overline{LJ} \cong \overline{RT}$

EX: $\Delta EFGT \cong \Delta SPQR$



- a) FIND X
- b) FIND y.

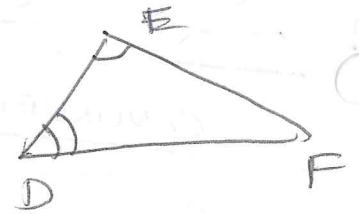
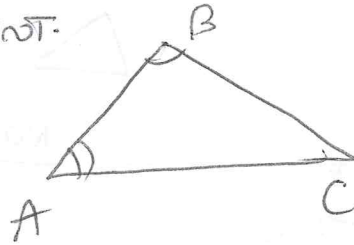
$\overline{GF} \cong \overline{RQ}$
 $12 = 2x - 4$
 $\frac{16}{2} = \frac{2x}{2}$

$x = 8$

$m\angle F = m\angle Q$
 $68^\circ = 64 + x$
 $68 = 64 + x$
 $-8 \quad -8$

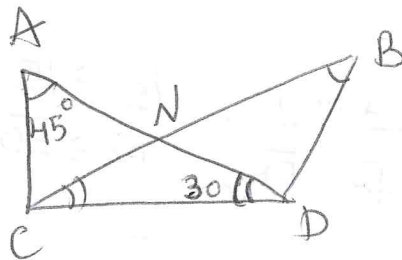
$60 = 64$ $y = 10$

③ THIRD ANGLE THEOREM: IF TWO ANGLES OF ONE TRIANGLE ARE CONGRUENT TO TWO ANGLES OF ANOTHER TRIANGLE, THEN THE THIRD ANGLES ARE ALSO CONGRUENT.



IF $\angle A \cong \angle D$ AND $\angle B \cong \angle E$ THEN $\angle C \cong \angle F$

PROBLEM



FIND $m\angle BDC$

$$\angle B = 45^\circ$$

$$\angle C = 30^\circ$$

$$\angle D = 180 - (45 + 30) = 105^\circ$$

$$m\angle BDC = 105^\circ$$