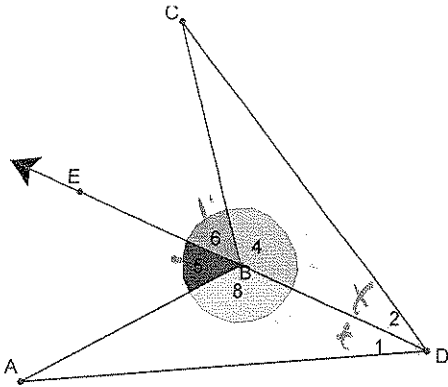
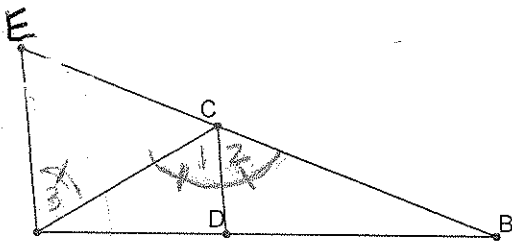


1. Given: \overline{DE} bisects $\angle ADC$
 $\angle 5 \cong \angle 6$
 Prove: $\triangle BCD \cong \triangle BAD$



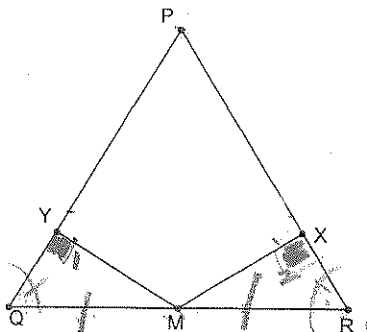
- ① \overline{DE} Bisects $\angle ADC$ Given
- $\angle 5 \cong \angle 6$
- ② $\angle 1 = \angle 2$ Bisector \div \angle into 2 = parts
- ③ $DB = DB$ Reflexive
- ④ $\angle 4$ supp $\angle 6$ linear pair forms
 $\angle 8$ supp $\angle 5$ supp \angle 's
- ⑤ $\angle 4 \cong \angle 8$ Supplements of $\cong \angle$'s are \cong
- ⑥ $\triangle BCD \cong \triangle BAD$ ASA

2. Given \overline{CD} bisects $\angle ACB$
 $\overline{EA} \parallel \overline{CD}$
 Prove: $AC = EC$



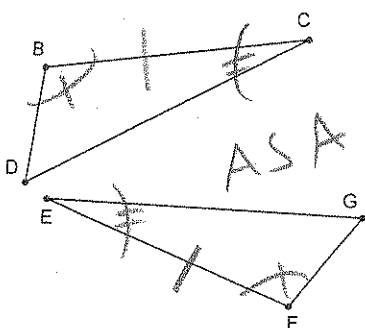
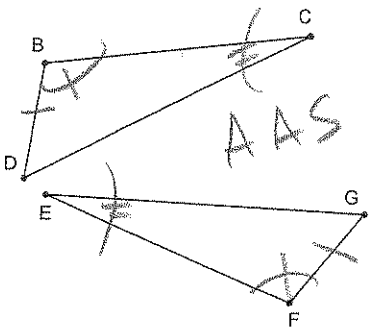
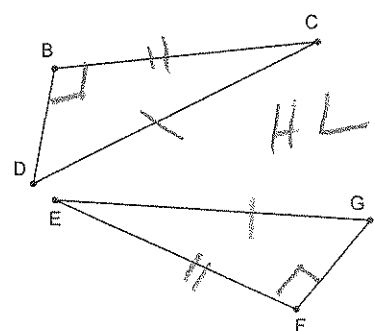
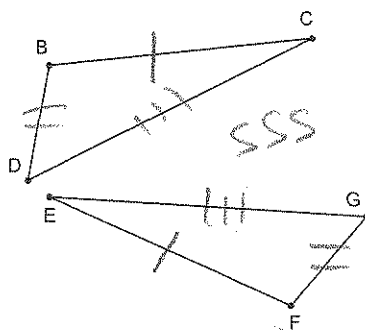
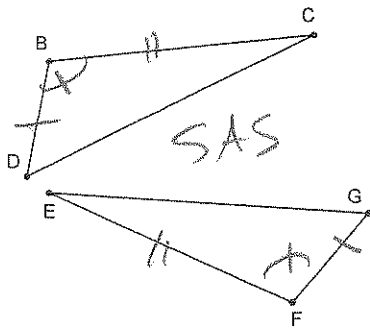
- ① \overline{CD} Bisects $\angle ACB$ Given
- $\overline{EA} \parallel \overline{CD}$
- ② $\angle 1 = \angle 2$ Bisector \div \angle into 2 = parts
- ③ $\angle 3 = \angle 1$ If lines parallel alternate interior \angle 's \cong
- ④ $\angle 2 = \angle 4$ If lines parallel corresponding \angle 's \cong
- ⑤ $\angle 3 = \angle 2$ Subst (2, 3)
- ⑥ $\angle B = \angle 3$ Subst (5, 6)
- ⑦ $EC = AC$

3. Given: $PQ = PR$
 M is the midpoint of \overline{QR}
 $\overline{MY} \perp \overline{PQ}$
 $\overline{MX} \perp \overline{PR}$
 Prove: $MY = MX$



- ① ——— Givens
- A ② $\angle Q = \angle R$ In \triangle if 2 sides = opposite \angle 's =
- S ③ $QM = MR$ Midpt \div seg into 2 = parts
- A ④ $\angle 1 = \angle 2$ \perp lines form rt \angle 's which are =
- ⑤ $\triangle YQM \cong \triangle XRM$ AAS
- ⑥ $MY = MX$ If \triangle 's \cong , corresponding sides =

4. Give the 5 methods for proving triangles congruent. Draw in these triangles what you would need for each method to prove $\triangle BCD \cong \triangle FEG$



5. Find the values of all of the missing angles with the given information.

A.

$m\angle ABC = 7x^2 - 1$
 $m\angle BCD = 4x^2 + 2x$
 $m\angle BDC = 2x^2 + 2$

$1 = 180 - 2$
 $3 + 4 = 180 - 2$

$$7x^2 - 1 = 4x^2 + 2x + 2x^2 + 2$$

$$x^2 - 2x - 3 = 0$$

$$(x - 3)(x + 1) = 0$$

$x = 3 \quad x = -1$

62°	6°
42°	2°
20°	4°

B.

$\overline{CF} \parallel \overline{AB}$

$38^\circ m\angle BAE = 22y - 7(6 + 3x) + 2$
 $122^\circ m\angle ABC = 26x - 2(5 + 6y)$
 $58^\circ m\angle BCE = 16 - 14(6x - 5y)$
 $38^\circ m\angle AEF = -1 + 3(2x - 26) + 3y$

$$22y - 42 - 21x + 2 = -1 + 6x - 78 + 3y$$

$$-27x + 19y = -39$$

$$26x - 10 - 12y + 16 - 84x + 70y = 180$$

$$-58x + 58y = 174$$

$$-1566x = -2262$$

$$1102x = -3306$$

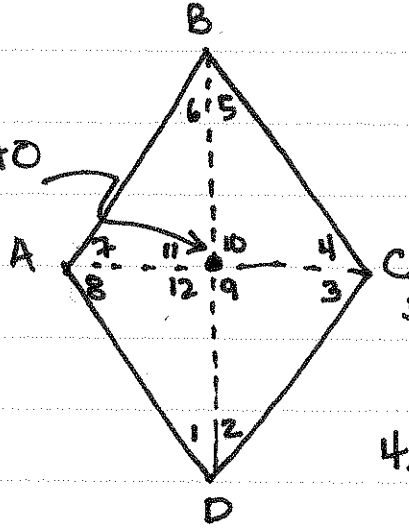
$$-464x = -5568$$

$x = 12 \quad y = 15$

MATH STAR QUESTION

4)

point O



PART A

1. QUAD. ABCD IS A RHOMBUS

2. $\overline{AB} \cong \overline{CB} \cong \overline{CD} \cong \overline{AD}$

3. $\triangle ABC, \triangle ADC, \triangle ADB, \triangle CDB$ ARE ALL ISOSC.

4. $\angle 7 \cong \angle 4: \angle 8 \cong \angle 3$
 $\angle 1 \cong \angle 6: \angle 2 \cong \angle 5$

5. $\overline{AC} \cong \overline{AC}: \overline{BD} \cong \overline{BD}$

6. $\triangle ABC \cong \triangle ADC \neq$
 $\triangle ADB \cong \triangle CDB$

7. $\angle 1 \cong \angle 2: \angle 7 \cong \angle 8$
 $\angle 6 \cong \angle 5: \angle 4 \cong \angle 3$

8. $\triangle ABO \cong \triangle CBO \cong$
 $\triangle ADO \cong \triangle CDO$

9. $\angle 9 \cong \angle 10 \cong \angle 11 \cong \angle 12$

10. $9 + 10 + 11 + 12 = 360$
IMPLIES EACH
 $\angle = 90^\circ$

11. $\overline{AC} \perp \overline{BD}$

1. GIVEN

2. DEFN OF A RHOMBUS

3. DEFN OF ISOSC. \triangle

4. DEFN OF ISOSC.

5. REFLEXIVE PROP.

6. SAS

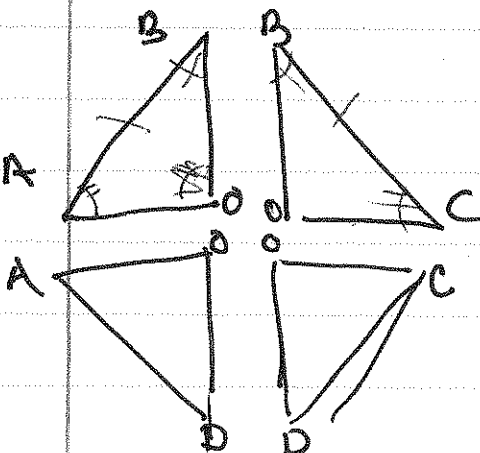
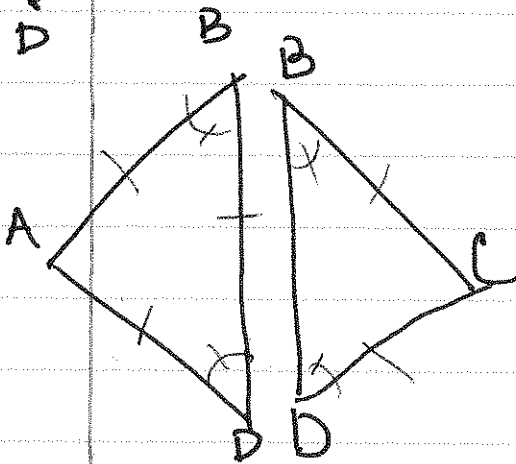
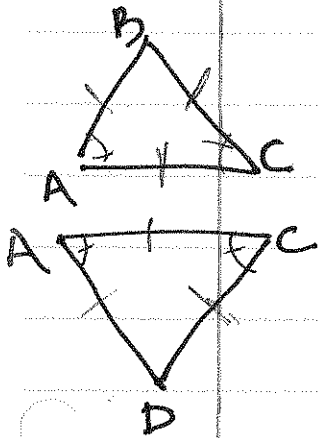
7. CPCTC

8. ASA

9. CPCTC

10. CENTRAL ANGLES TOTAL 360°

11. DEFN \perp LINES



PART B

1. PART A PROOF (STEP 7)

2. \overline{BD} BISECTS
 $\angle B \neq \angle D:$
 \overline{AC} BISECTS
 $\angle A \neq \angle C$

1. GIVEN "J"

2. DEFN OF AN ANGLE BISECTOR

LONGMAN GROUP

UNIT A

1. The first part of the unit is a general introduction to the group. It covers the basic structure and the main types of rocks that occur in the area.

2. The second part of the unit is a detailed description of the various rock types. This includes a discussion of the mineralogy and the texture of the rocks.

3. The third part of the unit is a description of the various structures that occur in the rocks. This includes a discussion of the folding and the fracturing of the rocks.

4. The fourth part of the unit is a description of the various fossils that occur in the rocks. This includes a discussion of the types of fossils and their distribution.

5. The fifth part of the unit is a description of the various geological features that occur in the area. This includes a discussion of the various types of faults and the various types of folds.

6. The sixth part of the unit is a description of the various geological structures that occur in the area. This includes a discussion of the various types of faults and the various types of folds.

7. The seventh part of the unit is a description of the various geological structures that occur in the area. This includes a discussion of the various types of faults and the various types of folds.

8. The eighth part of the unit is a description of the various geological structures that occur in the area. This includes a discussion of the various types of faults and the various types of folds.

9. The ninth part of the unit is a description of the various geological structures that occur in the area. This includes a discussion of the various types of faults and the various types of folds.

10. The tenth part of the unit is a description of the various geological structures that occur in the area. This includes a discussion of the various types of faults and the various types of folds.

11. The eleventh part of the unit is a description of the various geological structures that occur in the area. This includes a discussion of the various types of faults and the various types of folds.

