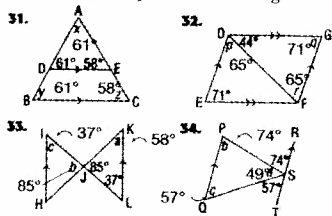


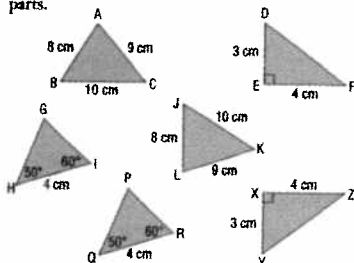
Find the measure of each unknown angle.



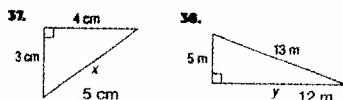
33. List the pairs of congruent parts in the congruent triangles.



34. List the pairs of congruent triangles. State why they are congruent. List the other equal parts.



Calculate the length of the unknown side.



38. A ship left Port Alberni, B.C., and sailed west for 3 h at 15 km/h, then north for 2 h at 20 km/h. To the nearest tenth of a kilometre, how far was the ship from Port Alberni? 60.2 km

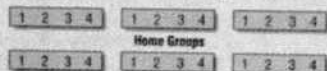
### Group Decision Making The Cannonball Run

The Cannonball Run is a famous car rally, which begins and ends in Detroit, Michigan. The course goes through these cities in this order.

Detroit, Michigan  
Indianapolis, Indiana  
Denver, Colorado  
Las Vegas, Nevada  
Monterey, California  
Los Angeles, California  
Tucson, Arizona

Laredo, Texas  
Jackson, Mississippi  
Atlanta, Georgia  
Darlen, Connecticut  
Mansfield, Ohio  
Detroit, Michigan

1. Work in home groups. Draw a map of the Cannonball Run, using the shortest possible route between cities. Mark the highway numbers on the map.



2. Determine the driving distance from Detroit to Indianapolis, from Indianapolis to Denver, and so on. Mark the distances on the map.

3. Find the total driving distance for the Cannonball Run.

4. The speed limit in the rally is 80 km/h. About how many hours would the rally take to complete at this speed?

5. If the rally started at noon on a Saturday, and vehicles were on the road 24 h/day, on what day and at what time would the rally finish?

6. Compare your map and driving times with those of other groups. Account for any differences.

7. Evaluate how effectively the members of your group worked together.

129

## Group Decision Making

### The Cannonball Run

(large map of the United States)

Display the map of the United States. Before the students begin, the class should discuss what they will understand by the phrase *the shortest possible route between cities*.

What highways show up on the map depends on the size of the map. Different details may be given in other resources. Ask:

*Where would you find driving distances between American cities?*

Before beginning, the group should consider several points, such as:

- What task(s) is each person to do?
- What size is the map to be?
- Is each job (1–7) to be done by the same person, or is each person to have a role in each job?

### Study Guide

Questions	Sections	Pages
1	3.1	80–81
2–8	3.2	82–83
9–18	3.4	86–87
19–22	3.5	88–89
23, 24	3.6	90–91
25–28	3.8	94–95
29, 30	3.9	98–99
31–34	3.10	100–101
35, 36	3.12, 3.15	104–105, 122–123
37–39	3.13, 3.14	108–111

### Additional Text Answers

- A, C, D, F
  - AE, BG, DF
  - $\angle BAC, \angle GAC, \angle ACD, \angle CED, \angle CEF$
  - AB, AE, EF
  - AG, AB, AC, CE, ED, EF
- $\triangle ABC \cong \triangle LJK$ , SSS:  $\angle A = \angle L, \angle B = \angle J, \angle C = \angle K$ ;  $\triangle EDF \cong \triangle XYZ$ , SAS:  $DF = YZ, \angle D = \angle Y, \angle F = \angle Z$ ;  $\triangle GHI \cong \triangle PQR$ , ASA:  $GH = PQ, GI = PR, \angle G = \angle P$

### Related Resources

- Teaching Edition Masters: triangle dot paper, page 519 tangrams, page 535
- MATHPOWER™ Problem Solving/Probability Pack: tangrams