

Learning Outcome

- Review the skills and concepts in Chapter 3.

Using the Review

Have the students work in pairs to complete the Review. In some sections, they might divide the questions between them and then check each other's work. Encourage the students to discuss their strategies. When discussing questions 9-12, 19-22, and 31-34, students can describe the relationships they used to find the unknown angles. In many instances, there is more than one way to determine the unknown angle.

Meeting in small groups, the students can mark and discuss their solutions and report any questions that caused difficulty. Discuss these questions with the class.

Reaching Suggestions

For those students who are having difficulty with the material in this chapter, you may wish to form small groups and use the following activities.

Lines and Angles

(*tangrams*) From the different tangram pieces, used alone or two or more at a time, find 2 examples to illustrate each of the following. Trace the tangram piece, and mark the example.

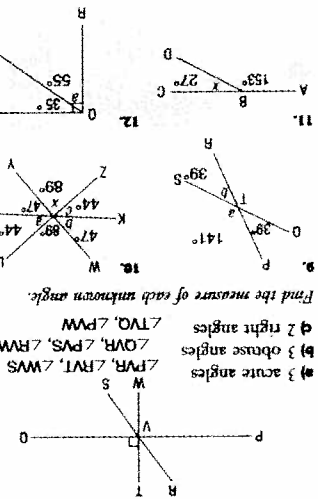
- acute angle
- right angle
- obtuse angle
- reflex angle
- equal opposite angles
- complementary angles
- supplementary angles
- equal corresponding angles
- perpendicular lines

If any example shows more than one concept, explain why.

Review

Review

- Name the following in the diagram.
 - 4 points
 - 3 lines
 - 5 angles
 - 3 rays
 - 6 line segments
- Draw the following angles:
 - 2.55°
 - 2.76°
 - 4.135°
 - 1.156°
 - 2.347°
- Use the diagram to name the following.
 - 1. acute angles $\angle PVR, \angle RVT, \angle WVS$
 - 2. obtuse angles $\angle QVR, \angle PVS, \angle RVM$
 - 3. right angles $\angle TVQ, \angle PWM$



- Write the measure of the complementary angle.
- 35°
 - 55°
 - 66°
 - 24°
 - 89°
 - 1°
- Write the measure of the supplementary angle.
- 47°
 - 133°
 - 12.102°
 - 78°
 - 18.156°
 - 24°

Triangles

(*triangle dot paper*) On triangle dot paper, draw an acute triangle, a right triangle, and an obtuse triangle. Explain why the triangles deserve these names.

Then, draw an equilateral triangle, an isosceles triangle, and a scalene triangle, and explain why these names apply.

Next, relabel the triangles, describing each triangle using two terms, one of acute, right, and obtuse, and one of equilateral, isosceles, and scalene.

The Pythagorean Theorem

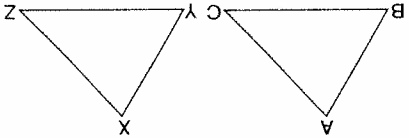
Draw a triangle with sides 5 cm, 12 cm, and 13 cm in length. Explain why one angle of the triangle is a right angle.

Polygons

(*triangle dot paper*) Draw five polygons, each with a different number of sides, on triangle dot paper. Make some of the polygons regular, if possible. Name the polygons.

Find the size of each interior angle in the polygons. Then, explain why some polygons are called regular and some are not.

Congruent Triangles



For $\triangle ABC$ and $\triangle XYZ$ above, give 3 different sets of three conditions that would prove $\triangle ABC \cong \triangle XYZ$.

- Find the measure of each unknown angle.
 - 19. $70^\circ, 110^\circ, 70^\circ$
 - 20. $126^\circ, 54^\circ, 126^\circ$
 - 21. $97^\circ, 97^\circ, 97^\circ$
 - 22. $104^\circ, 104^\circ, 76^\circ$
- Copy each figure and draw all the lines of symmetry.
 - 23. A T-shaped figure.
 - 24. An inverted triangle.
- Classify each triangle by sides and by angles.
 - 25. Right, isosceles, obtuse, scalene. Sides: 4 cm, 4 cm, 5.7 cm. Angles: $90^\circ, 45^\circ, 45^\circ$.
 - 26. Right, scalene. Sides: 5 cm, 6 cm, 10.1 cm. Angles: $90^\circ, 37^\circ, 53^\circ$.
- Calculate the missing measures.
 - 27. Triangle with angles $56^\circ, 111^\circ, 69^\circ$.
 - 28. Triangle with angles $82^\circ, 49^\circ, 69^\circ$.
 - 29. Triangle with angles $51^\circ, 73^\circ, 76^\circ$.
 - 30. Polygon with angles $181^\circ, 139^\circ, 92^\circ, 115^\circ, 92^\circ$.
- Find the measure of the unknown angle in each polygon.
 - 31. Triangle with angles $41^\circ, 81^\circ, 58^\circ$.