8.3 Area of Triangles

Chapter 8: Geometry and Measurement

Name: _____ Date: _____ Class/Period: _____

Problem 8.33 A triangle has base 12 and perpendicular height 5. Find its area.

Problem 8.34 A triangle has base 7.5 and perpendicular height 4.8. Find its area.

Problem 8.35 A triangle has base $\frac{5}{6}$ and perpendicular height $\frac{9}{4}$. Find its area.

Problem 8.36 A triangle has area 42 and base 12. Find its perpendicular height.

Problem 8.37 A triangle has area 35 and perpendicular height 7. Find its base.

Problem 8.38 A right triangle has perpendicular legs 15 and 8. Find its area.

Problem 8.39 A right triangle has perpendicular legs 5 and 12 and hypotenuse 13. Find its area.

Problem 8.40 Explain why changing the third vertex horizontally while keeping base and height fixed preserves area.

Problem 8.41 Draw an obtuse triangle with an exterior altitude.

Problem 8.42 A triangle and parallelogram share base 10 and height 7. Compare areas.

Problem 8.43 The base doubles and height stays fixed. How does area change?

Problem 8.44 The base triples and height is halved. Find the area multiplier.

Problem 8.45 A triangle of area 64 has base twice its height. Find both.

Problem 8.46 A 9×8 rectangle and a triangle with base 18 have equal areas. Find the triangle's height.

Problem 8.47 A triangular flag has base 2.4 m and area 1.8 m^2. Find its height.

Problem 8.48 Two triangles share a base, and their third vertices lie on a line parallel to it. Prove their areas are equal.