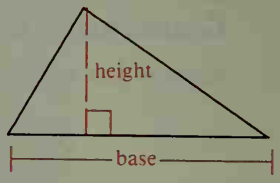
Exercises 15–20 refer to a triangle. Express the ratio of the height to the base in simplest form.



	15.	16.	17.	18.	19.	20.
height	5 km	1 m	0.6 km	1 m	8 cm	40 mm
base	45 km	0.6 m	0.8 km	85 cm	50 mm	0.2 m

Write the algebraic ratio in simplest form.

21. $\frac{3a}{4ab}$ **22.** $\frac{2cd}{5c^2}$ **23.** $\frac{3(x+4)}{a(x+4)}$

In Exercises 24–29 find the measure of each angle.

B **24.** The ratio of the measures of two complementary angles is 4:5.

25. The ratio of the measures of two supplementary angles is 11:4.

26. The measures of the angles of a triangle are in the ratio 3:4:5.

27. The measures of the acute angles of a right triangle are in the ratio 5:7.

28. The measures of the angles of an isosceles triangle are in the ratio 3:3:2.

29. The measures of the angles of a hexagon are in the ratio 4:5:5:8:9:9.

30. The perimeter of a triangle is 132 cm and the lengths of its sides are in the ratio 8:11:14. Find the length of each side.

31. The measures of the consecutive angles of a quadrilateral are in the ratio 5:7:11:13. Find the measure of each angle, draw a quadrilateral that satisfies the requirements, and explain why two sides must be parallel.

32. What is the ratio of the measure of an interior angle to the measure of an exterior angle in a regular hexagon? A regular decagon? A regular n-gon?

33. A team's best hitter has a lifetime batting average of .320. He has been at bat 325 times.

a. How many hits has he made?

b. The same player goes into a slump and doesn't get any hits at all in his next ten times at bat. What is his current batting average to the nearest thousandth?

C **34.** A basketball player has made 24 points out of 30 free throws. She hopes to make all her next free throws until her free-throw percentage is 85 or better. How many consecutive free throws will she have to make?

35. Points B and C lie on $\overline{AD}$. Find AC if $\frac{AB}{BD} = \frac{3}{4}$, $\frac{AC}{CD} = \frac{5}{6}$, and $BD = 66$.

36. Find the ratio of x to y: $\frac{4}{y} + \frac{3}{x} = 44$

$\frac{12}{y} - \frac{2}{x} = 44$