

Practice 32 Right Triangles

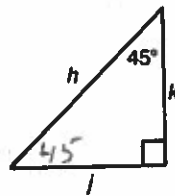
Lessons 8-1 through 8-4

Tell whether a triangle with sides of the given lengths is acute, right, or obtuse. If a triangle can't be formed, write *not possible*.

- 4, 5, 6 $6^2 \squareq 4^2 + 5^2$; acute
- 5, 12, 13 $13^2 \squareq 5^2 + 12^2$; right
- 2, 7, 9 not poss.
- 1, $\sqrt{7}$, $2\sqrt{2}$ $(2\sqrt{2})^2 \squareq (\sqrt{7})^2 + 1^2$; right
- 6, 8, 12 $12^2 \squaregt 6^2 + 8^2$; obtuse
- $\sqrt{5}$, $2\sqrt{5}$, 5 $5^2 \squareq (\sqrt{5})^2 + (2\sqrt{5})^2$; right

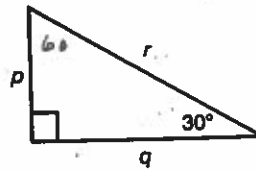
Complete the tables.

	7.	8.	9.	10.	11.
j	3	$\frac{1}{2}$	$\sqrt{2}$	$4\sqrt{2}$	$\sqrt{3}$
k	3	$\frac{1}{2}$	$\sqrt{2}$	$4\sqrt{2}$	$\sqrt{3}$
h	$3\sqrt{2}$	$\frac{\sqrt{2}}{2}$	2	8	$\sqrt{6}$



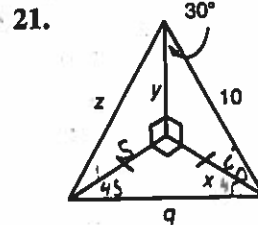
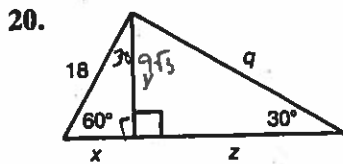
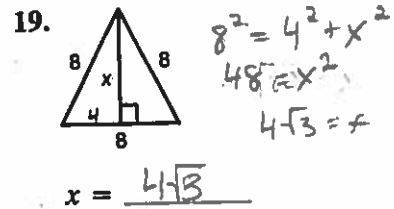
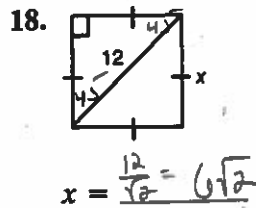
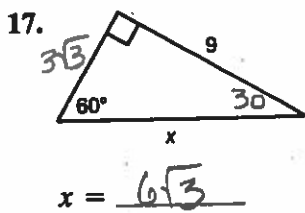
Exs. 7-11

	12.	13.	14.	15.	16.
p	5	3	10	$2\sqrt{3}$	$3\sqrt{6}$
q	$5\sqrt{3}$	$3\sqrt{3}$	$10\sqrt{3}$	6	$3\sqrt{18}$ $9\sqrt{2}$
r	10	6	20	$4\sqrt{3}$	$6\sqrt{6}$



Exs. 12-16

Find the missing lengths in each figure. The diagram in Exercise 21 shows a three-dimensional figure.



$5^2 + (5\sqrt{3})^2 = z^2$
 $100 = z^2$
 $10 = z$