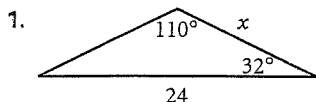## Practice Masters Level B
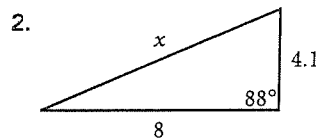
10.5 The Law of Cosines

In Exercises 1 and 2, which rule should you use, the law of sines
or the law of cosines, to find each indicated measurement?
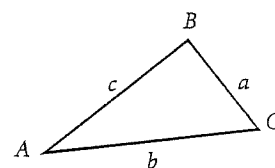Explain your reasoning.

1.

2.

_____   _____

_____   _____

In Exercises 3–5, find the indicated measures. Round your
answers to the nearest tenth.
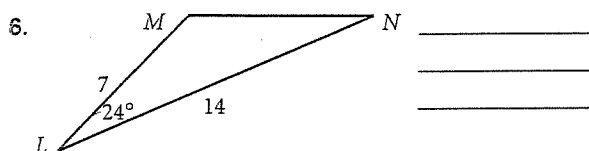
3. $m\angle C = 52°$, $b = 10.3$, $a = 6.1$, $c = ?$ _____

4. $m\angle C = 68°$, $m\angle A = 28°$, $b = 24$, $c = ?$ _____

5. $a = 3.2$, $b = 6.5$ $c = 5.0$, $m\angle C = ?$ _____

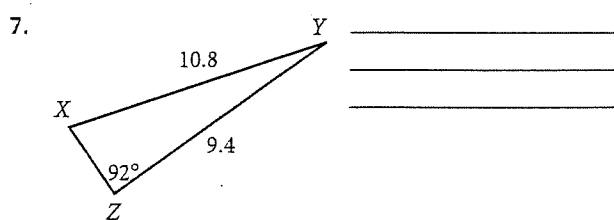In Exercises 6–9, use the law of cosines and/or the law of sines
to solve each triangle. Round answers to the nearest tenth.
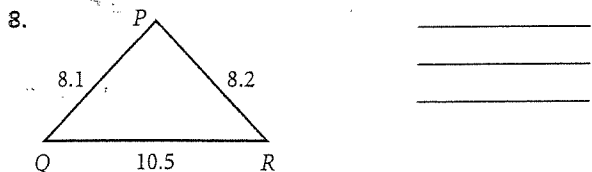
6.   _____

7.   _____
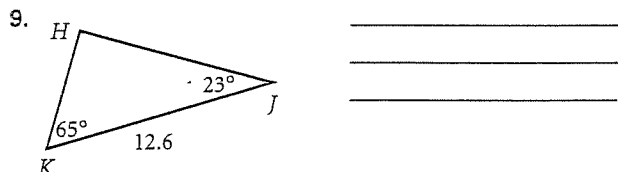
8.   _____

9.   _____

10. Two trains depart from the same station on tracks that form a
65° angle. Train *A* leaves at noon and travels at an average speed of
52 miles per hour. Train *B* leaves at 1 P.M. and travels at an average
speed of 60 miles per hour. How far apart are the trains at 3 P.M.? _____