Math Analysis Name_____

Law of Sines Corrective Assignment

State the number of possible triangles that can be formed using the given measurements.

1) $m\angle C = 55°$, $b = 25$ yd, $c = 9$ yd

2) $m\angle A = 137°$, $c = 9$ ft, $a = 14$ ft

3) In $\triangle DEF$, $m\angle D = 123°$, $f = 5$ m, $d = 30$ m

4) In $\triangle HPK$, $m\angle H = 29°$, $k = 24$ yd, $h = 15$ yd

Solve each triangle. Round your answers to the nearest tenth.

5) $m\angle B = 65°$, $a = 17$ ft, $b = 16$ ft

6) $m\angle A = 26°$, $c = 17$ cm, $a = 15$ cm

7) $m\angle A = 82°$, $c = 10$ ft, $a = 5$ ft

8) $m\angle C = 84°$, $m\angle A = 57°$, $c = 19$ m

9) In $\triangle HPK$, $m\angle H = 94°$, $k = 24$ mi, $h = 20$ mi

10) In $\triangle QRP$, $m\angle Q = 66°$, $p = 22$ in, $q = 21$ in

11) In $\triangle ZXY$, $m\angle X = 43°$, $m\angle Y = 52°$, $x = 13$ km

12) In $\triangle YZX$, $m\angle Y = 96°$, $m\angle X = 11°$, $x = 5$ in

Answers to Law of Sines Corrective Assignment

1) None

2) One triangle

3) One triangle

4) Two triangles

5) $m\angle C = 40.6°$, $m\angle A = 74.4°$, $c = 11.5$ ft
Or $m\angle C = 9.4°$, $m\angle A = 105.6°$, $c = 2.9$ ft

6) $m\angle B = 124.2°$, $m\angle C = 29.8°$, $b = 28.3$ cm
Or $m\angle B = 3.8°$, $m\angle C = 150.2°$, $b = 2.3$ cm

7) Not a triangle

8) $m\angle B = 39°$, $b = 12$ m, $a = 16$ m

9) Not a triangle

10) $m\angle R = 40.9°$, $m\angle P = 73.1°$, $r = 15.1$ in
Or $m\angle R = 7.1°$, $m\angle P = 106.9°$, $r = 2.8$ in

11) $m\angle Z = 85°$, $y = 15$ km, $z = 19$ km

12) $m\angle Z = 73°$, $y = 26.1$ in, $z = 25.1$ in