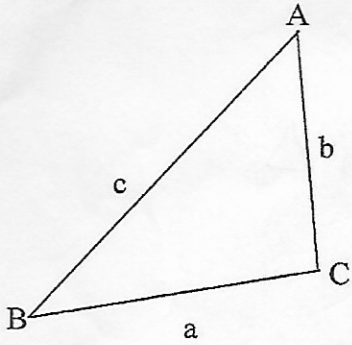


Name \_\_\_\_\_ Date \_\_\_\_\_ Per \_\_\_\_\_

Law of Sines/Law of Cosines/Area of Triangles.  
Show all the work. NO WORK = NO CREDIT



(Not drawn to scale)

1)	6
2)	8
3)	17
4)	11
5)	$6\sqrt{2}$
6)	$71^\circ$ or $109^\circ$
7)	$16^\circ$
8)	NO $\Delta$
9)	NO $\Delta$
10)	30
11)	$55.6 \text{ gal}^2$
12)	$49.4 \text{ ft}^2$

I. Draw a triangle for each problem. Decide if SSS, SAS, ASA, AAS, or SSA before doing the work.

Round all answers to the nearest whole number in 1-4 and 6-10.

In problem #5 give the exact answer.

- 1)  $a=8, b=3, m\angle C = 30^\circ, c = ?$
- 2)  $b = 3, c = 5, m\angle A = 150^\circ, a = ?$
- 3)  $m\angle A = 30^\circ, m\angle B = 70^\circ, a = 9, b = ?$
- 4)  $m\angle A = 60^\circ, m\angle B = 40^\circ, b = 8, a = ?$
- 5)  $m\angle A = 45^\circ, m\angle B = 15^\circ, c = 6\sqrt{3}, a = ?$  (Exact Answer)
- 6)  $m\angle A = 35^\circ, a = 144, b = 238, m\angle B = ?$
- 7)  $m\angle A = 30^\circ, a = 30, b = 17, m\angle B = ?$
- 8)  $m\angle A = 9^\circ, a = 8, b = 60, m\angle B = ?$
- 9)  $m\angle A = 77^\circ 10', a = 39, b = 40, m\angle B = ?$
- 10)  $m\angle A = 52^\circ, a = 40, b = 25, m\angle B = ?$

II. Find the area of  $\Delta ABC$ . Round the answers to the nearest tenth.

- 11)  $a = 8 \text{ yds}, b = 15 \text{ yds}, m\angle C = 68^\circ$
- 12)  $b = 16 \text{ ft}, c = 8 \text{ ft}, m\angle B = 100^\circ$