Acc Math 3 Solving Oblique Triangles Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Find the measure of all three unspecified sides and angles and the area.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | Case | a | b | c | A | B | C | Area |
| 1 |  | 3 | 4 |  |  |  | 71° |  |
| 2 |  | 8 | 9 | 7 |  |  |  |  |
| 3 |  |  |  | 400 | 143° | 8° |  |  |
| 4 |  | 7 | 5 |  | 25° |  |  |  |
| 5 |  | 4 | 3 | 2 |  |  |  |  |
| 6 |  |  | 5 | 8 | 32.4° |  |  |  |
| 7 |  | 6 |  |  | 56° | 64° |  |  |
| 8 |  |  | 7 | 5 |  |  | 126° 40’ |  |
| 9 |  | 3 | 6 | 4 |  |  |  |  |
| 10 |  |  | 10 | 6 |  | 31° 10’ |  |  |
| 11 |  | 30 |  | 60 |  | 23° |  |  |
| 12 |  |  | 30 |  | 122° 50’ |  | 15° |  |
| 13 |  | 18 | 40 |  |  |  | 82° 30’ |  |
| 14 |  | 18 | 10 | 9 |  |  |  |  |
| 15 |  | 10 | 6 |  | 144.5° |  |  |  |
| 16 |  | 100 |  | 210 |  | 113° |  |  |
| 17 |  |  | 7 | 5 |  |  | 25° |  |
| 18 |  | 50 |  |  |  | 27° | 11° |  |
| 19 |  | 10 |  |  | 139° | 38° |  |  |
| 20 |  | 3 | 9 | 4 |  |  |  |  |
| 21 |  | 3 | 10 |  | 31° 10’ |  |  |  |
| 22 |  |  | 6 | 10 |  | 31° |  |  |
| 23 |  |  | 5 | 3 |  |  | 36° |  |
| 24 |  | 18 | 8 | 9 |  |  |  |  |
| 25 |  | 2000 | 1700 |  |  |  | 142° |  |
| 26 |  |  |  | 17 | 84° | 87° 30’ |  |  |
| 27 |  | 7 | 5 |  | 126° |  |  |  |
| 28 |  |  | 5 | 13 |  | 22° |  |  |

29) Suppose that you are Torpedo Officer aboard the USS Skipjack. Your submarine is conducting torpedo practice. The target is 7200m from you on a bearing of 276° and is steaming on a course of 68°. You have long-range torpedoes that will go 6400m and short-range that will go 3200m. Between what two bearings can you fire torpedoes that will reach the target’s path if you use:

a) Long-Range Torpedoes b) Short Range torpedoes?

Target

You

N

N

276°

68°

7200m

Target’s Path

30) Calvin Butterball is swimming in Lake Rancid when he spots two alligators. He tells you that his distance to alligator 1 is 30m, the distance between the alligators is 20m, and the angle at Calvin is 58°.

a) Show Calvin that he must have made a mistake in measurement, since no triangle exists.

b) Find the *two* possible distances between Calvin and alligator 2 using the correct angle 28°.

Alligator #2

Calvin

Alligator #1

20m

30m