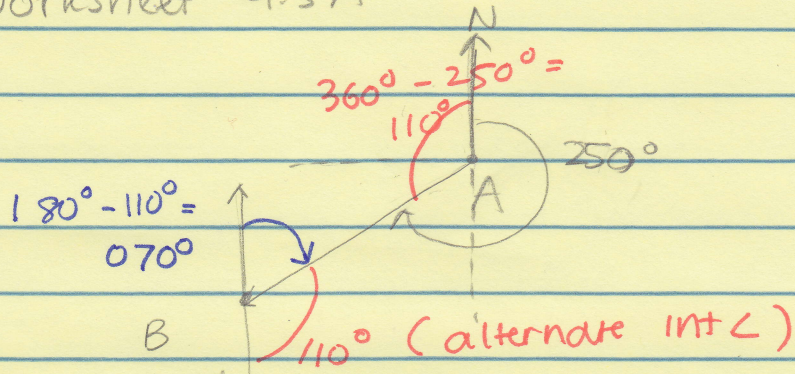
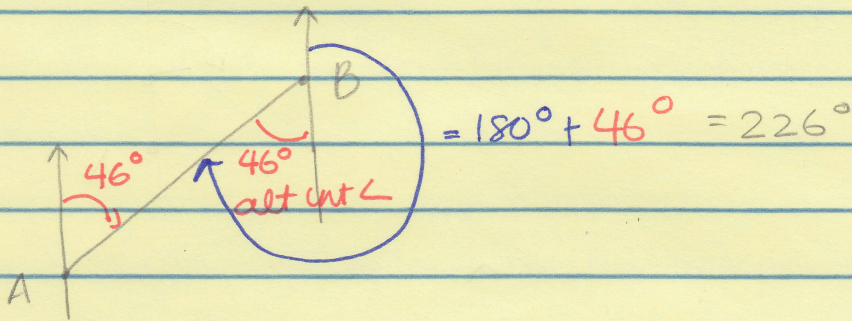


Worksheet 9.5A

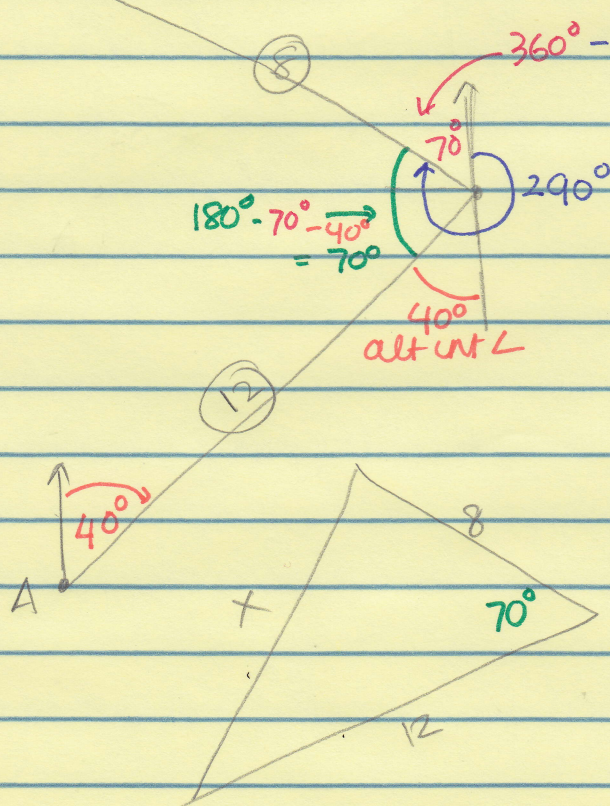
1.



2.



3.



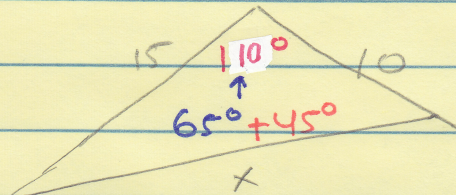
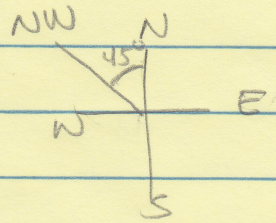
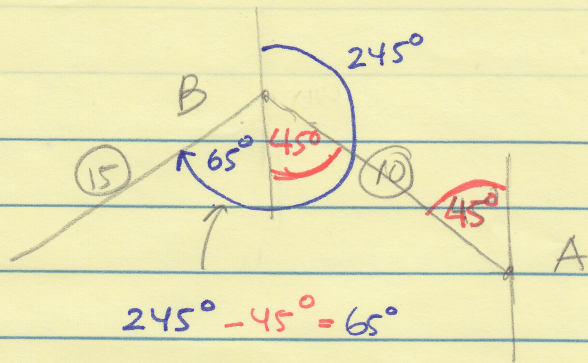
$$x^2 = 8^2 + 12^2 - 2(8)(12)\cos 70^\circ$$

$$x^2 = 142.3321325$$

$$x = \sqrt{142.3321325}$$

$$11.9 \text{ km}$$

4



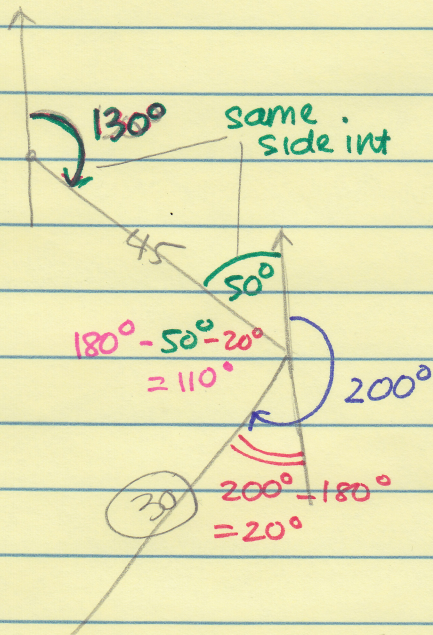
$$x^2 = 10^2 + 15^2 - 2(10)(15)\cos 110^\circ$$

$$x^2 \approx 427.606043$$

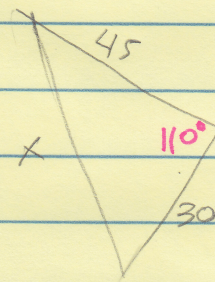
$$x = 20.67863736$$

≈ 20.7 nautical mile

5.



R	T	D
15	3	45
15	2	30



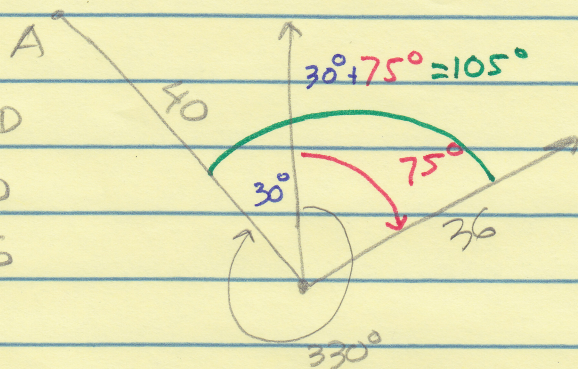
$$x^2 = 45^2 + 30^2 - 2(45)(30)\cos 110^\circ$$

$$x^2 = 3848.45$$

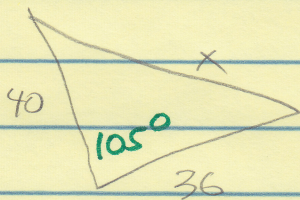
$x \approx 62.0$ nautical miles

6

	R	T	D
A	10	4	40
B	12	3	36



Ship A
From 10am to 2pm
= 4hrs
Ship B: 11am to 2pm
= 3hrs



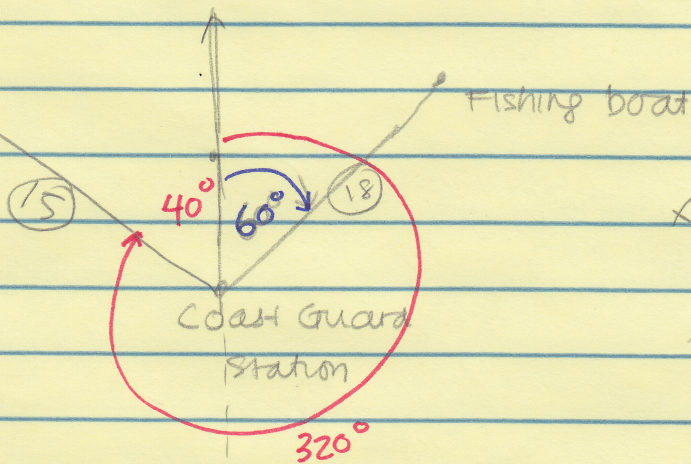
$$x^2 = 40^2 + 36^2 - 2(40)(36)\cos 105^\circ$$

$$= 3641.39885$$

$$x \approx 60.3 \text{ nautical miles}$$

7

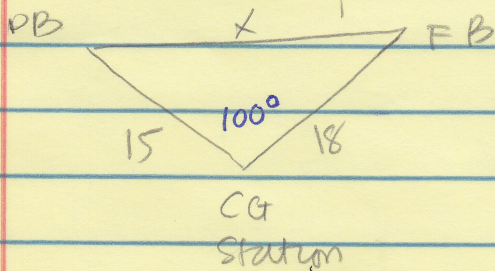
Patrol boat



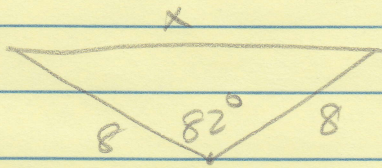
$$x^2 = 15^2 + 18^2 - 2(15)(18)\cos 100^\circ$$

$$x^2 = 642.77$$

$x \approx 25.4$ nautical miles



8



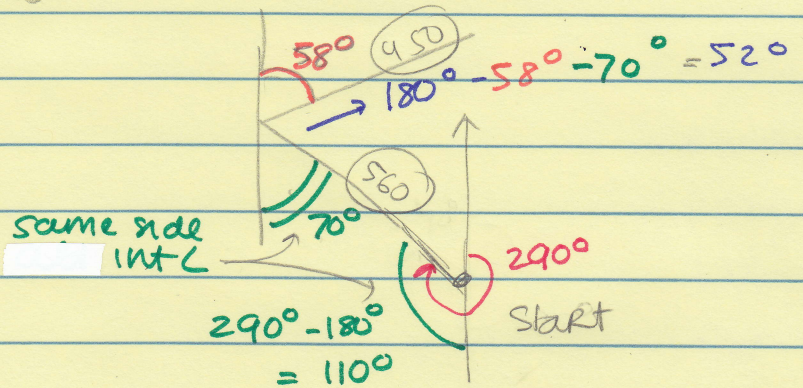
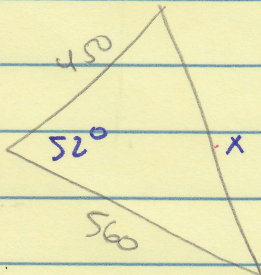
R T D
4 2 8

$$x^2 = 8^2 + 8^2 - 2(8)(8)\cos 82^\circ$$

$$x \approx 10.5 \text{ mi}$$

9.

R T D
280 2 560
300 1.5 450

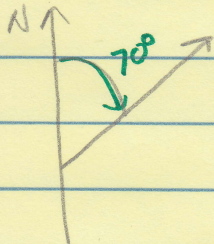


$$x^2 = 450^2 + 560^2 - 2(450)(560)\cos 52^\circ$$

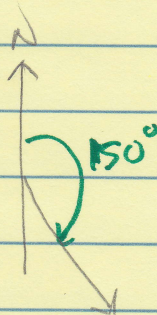
$$x \approx 453.7 \text{ km}$$

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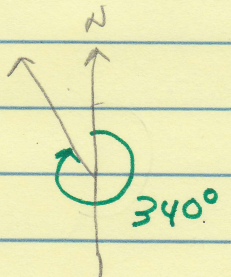
①



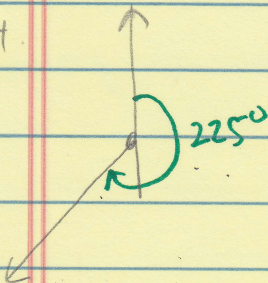
②



③



4



⑤

