Name: _____   Date: _____

BLM 7–3

Section 7.1 Extra Practice

1. a) Use the sine law to write two ratios that are equivalent to $\dfrac{p}{\sin P}$ in $\triangle PQR$.

b) Write two ratios that are equivalent to $\dfrac{\sin P}{p}$.
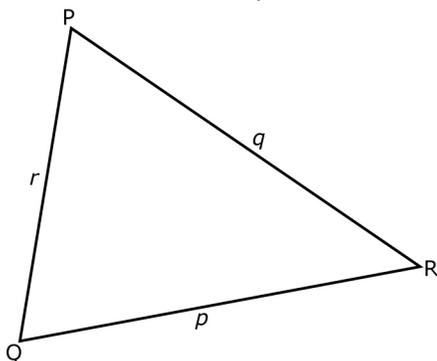
2. Solve for each unknown side, to the nearest half of a unit.

a) $\dfrac{a}{\sin 32°} = \dfrac{15 \text{ cm}}{\sin 60°}$

b) $\dfrac{46 \text{ m}}{\sin 63°} = \dfrac{c}{\sin 45°}$

c) $\dfrac{a}{\sin 28°} = \dfrac{35 \text{ in.}}{\sin 81°}$

d) $\dfrac{12 \text{ ft}}{\sin 73°} = \dfrac{c}{\sin 45°}$

3. Solve for each unknown angle, to the nearest degree.

a) $\dfrac{\sin A}{15} = \dfrac{\sin 61°}{50}$

b) $\dfrac{\sin 38°}{40} = \dfrac{\sin B}{35}$

**c)** $\dfrac{\sin B}{45} = \dfrac{\sin 52°}{65}$

d) $\dfrac{\sin 80°}{85} = \dfrac{\sin C}{49}$

**4.** Determine the length of each side, to the nearest tenth of a unit.

a) side a

b) side e

c) side i

d) side k

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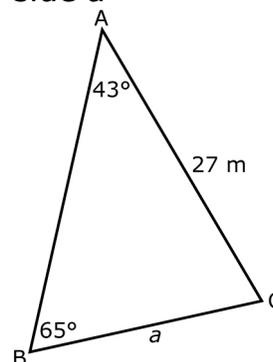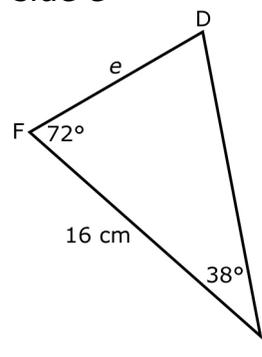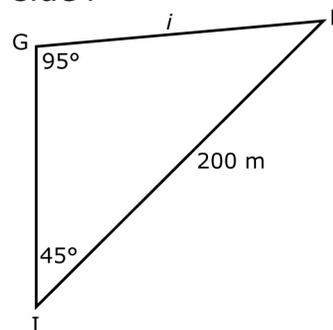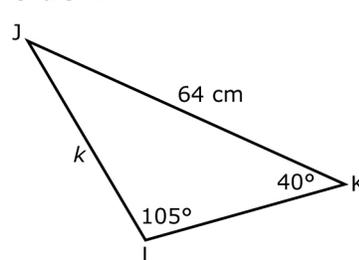
5. Determine the measure of each angle, to the nearest degree.

a) ∠A

A

80 m

65°

C

75 m

B

b) ∠E

D

40°

E

25 in.

18 in.

F

c) ∠G

G

14.5 m

H

12.6 m

85°

I

d) ∠K

K

35 ft

55°

L

38 ft

J
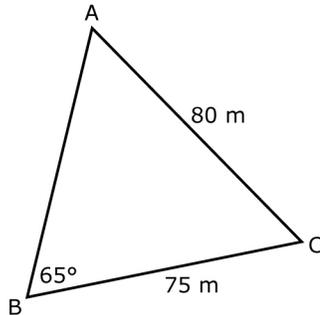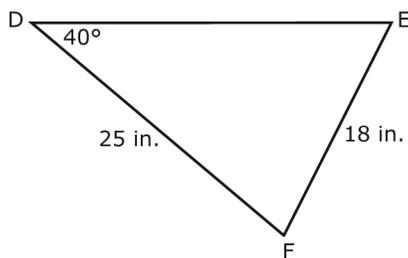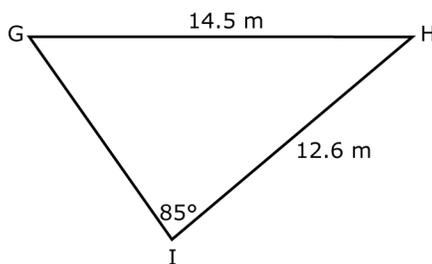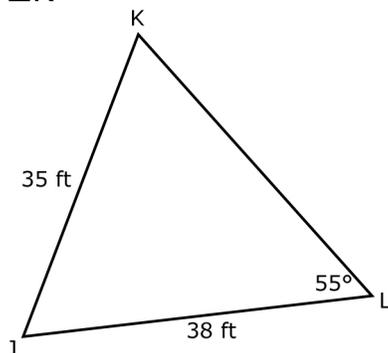
6. A lighthouse keeper spots an iceberg. The captain of a ship also sees the iceberg. The diagram shows their readings. How far is the ship from the iceberg? Express your answer to the nearest mile.

35 mi

42°

55°

d

iceberg
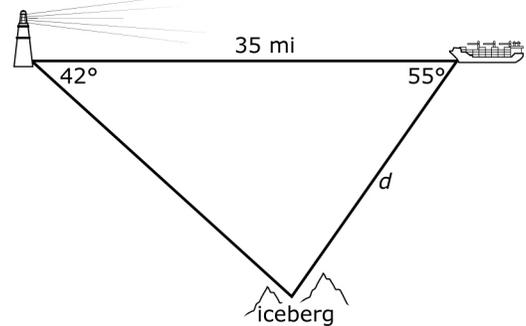
7. A surveyor spots a ship that is 2.5 km away. Her line of sight with the ship makes a 40° angle with the shoreline. Her assistant along the shoreline spots the same ship 1.8 km away. What is the measure of the angle at the assistant?

2.5 km

1.8 km

40°

x

surveyor   shoreline   assistant