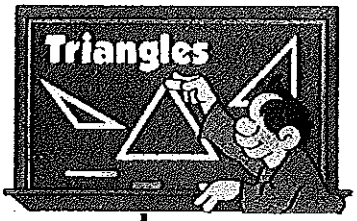


Boot Camp 3
Triangles
Take Home and Check

Accelerated

1) Which three lengths CANNOT be the lengths of the sides of a triangle?

A) 23m, 17m, 14m
B) 11m, 11m, 12m
C) 5m, 7m, 8m
D) 21m, 6m, 10m

1)

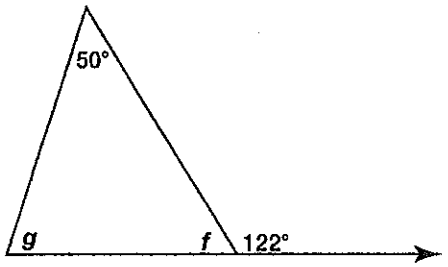
A) $14 + 17 > 23$

B) $11 + 11 > 12$

C) $5 + 7 > 8$

D) $6 + 10 < 21$

2) What is the measure of angles f and g? Show how you get your answer.



2)

Angle F =

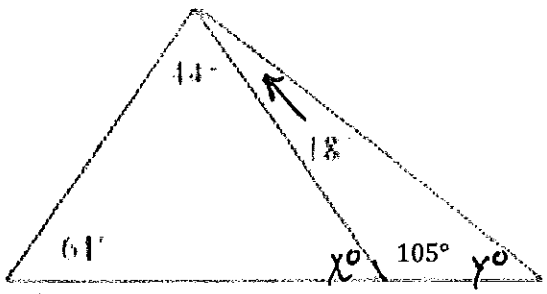
$180 - 122 = 58°$

(f and 122° are supplementary)

$50 + 58 = 108$

$180 - 108 =$ 72°

3) Find the values of x, y and z. The diagram is not to scale.



3)

Angle X =

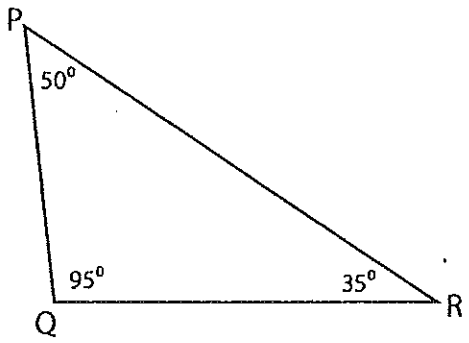
$180 - 105 =$ 75°

Angle Y =

$18 + 105 = 123°$

$180 - 123 =$ 57°

4) Use two letters to name the longest and shortest sides.



Longest side = _____

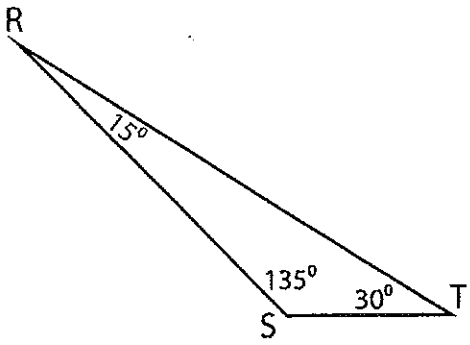
Shortest side = _____

4)

Longest side = $\overline{PR}$

Shortest side = $\overline{PQ}$

5) Use two letters to name the longest and shortest sides.



Longest side = _____

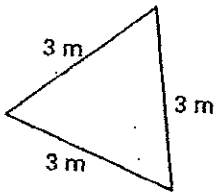
Shortest side = _____

5)

Longest side = $\overline{RT}$

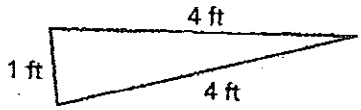
Shortest side = $\overline{ST}$

6) Classify the triangle by its sides and angles.



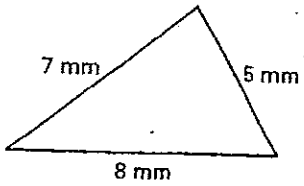
6)
Equilateral
Acute

7) Classify the triangle by its sides and angles.



7) Isosceles
Acute

8) Classify the triangle by its sides and angles.



8) Scalene
Acute

9) Determine if the given information will make a unique triangle. Explain why or why not.

a) Side lengths 3 and 5 and an included angle of 67 degrees.

b) Angles 73°, 7°, 100°

c) Angles 80° *and* 25° and an included side of 12.

a) yes, because the given info requires the third side to be drawn in a specific location.

b) No, because similar Δ's could be made.

c) yes, because the 2 given angles requires the 3rd ∠ to be 75°.

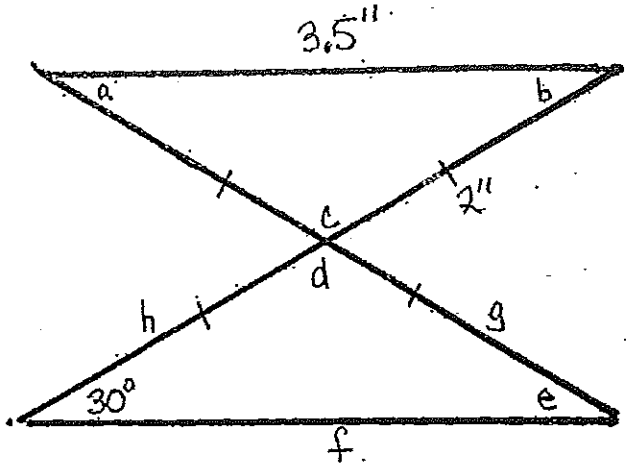
10) Construct a triangle in which

AB = 7.2 cm, AC = 7.2 cm and BC = 9 cm

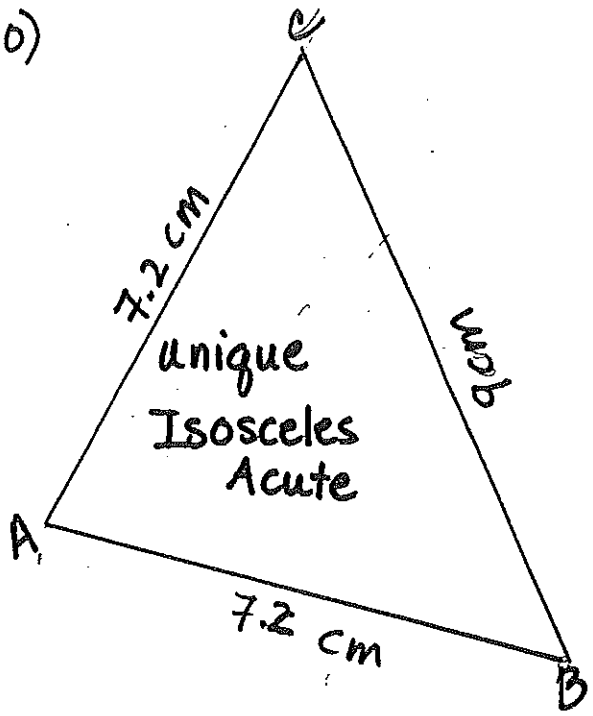
Is this a unique triangle?

What kind of Δ is this?

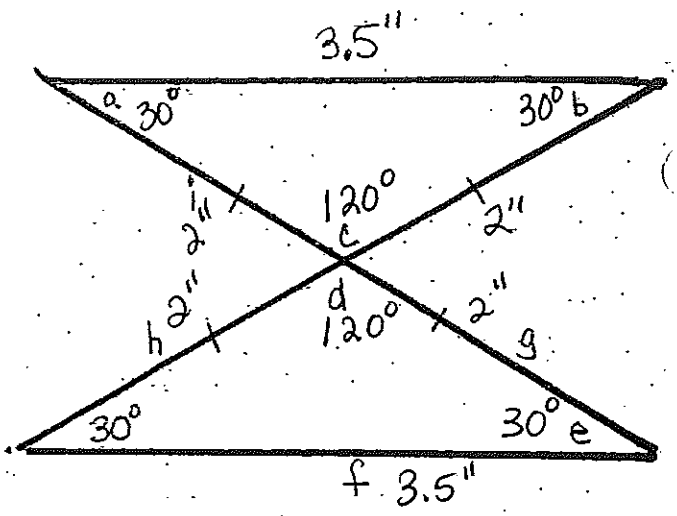
11) Find the measures of the missing sides and angles. Then classify each triangle by its sides and angles.



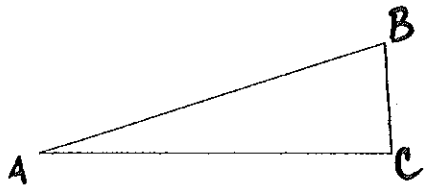
10)



11)

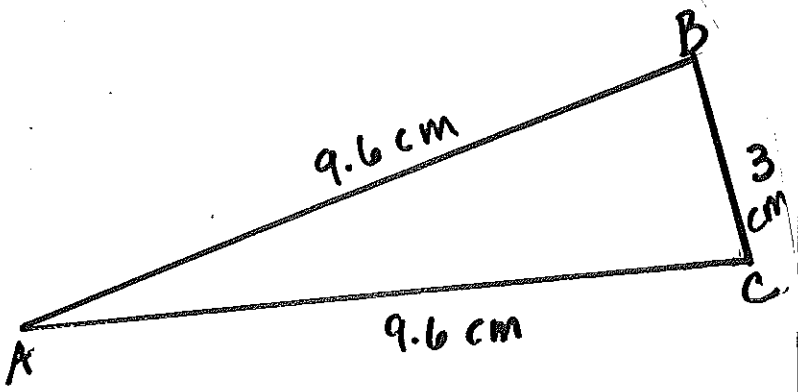


12) Construct a triangle whose sides are twice as long as the triangle below.



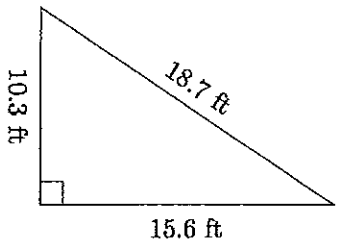
12)

$\overline{AB}$ $4.8 \times 2 = 9.6$ cm
$\overline{BC}$ $1.5 \times 2 = 3$ cm
$\overline{AC}$ $4.8 \times 2 = 9.6$ cm

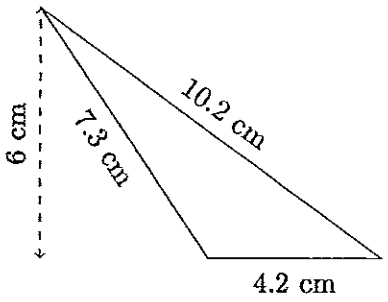


13) Calculate the perimeter and area of these triangles.

a)



b)



13)

a) $P = 10.3 + 18.7 + 15.6 =$
44.6 ft

$A = \frac{bh}{2} \quad \frac{(15.6)(10.3)}{2} = \frac{160.68}{2} =$

80.34 ft²

b) $P = 10.2 + 7.3 + 4.2 =$
21.7 cm

$A = \frac{bh}{2} = \frac{(4.2)(6)}{2} = \frac{25.2}{2} =$

12.6 cm²