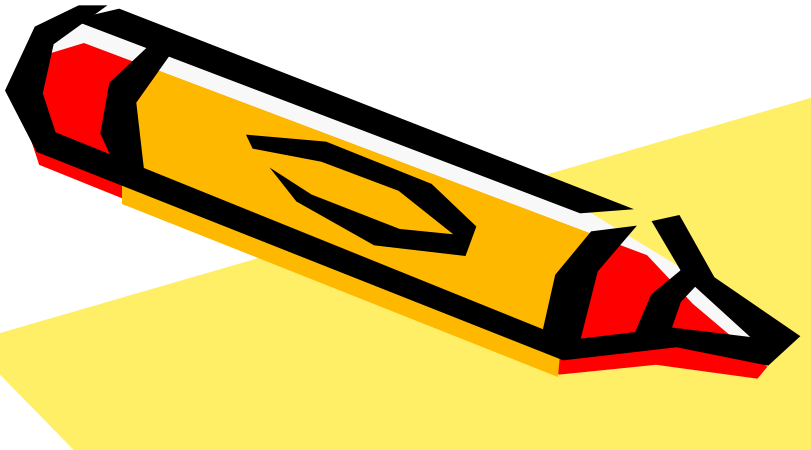
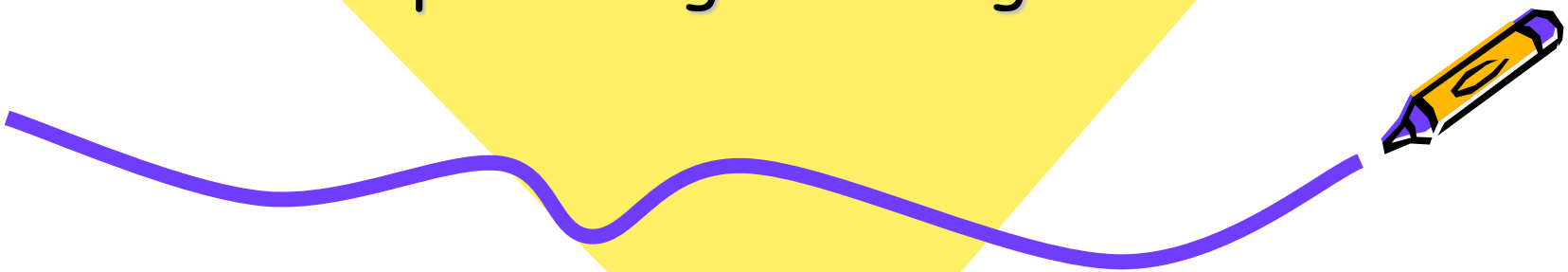


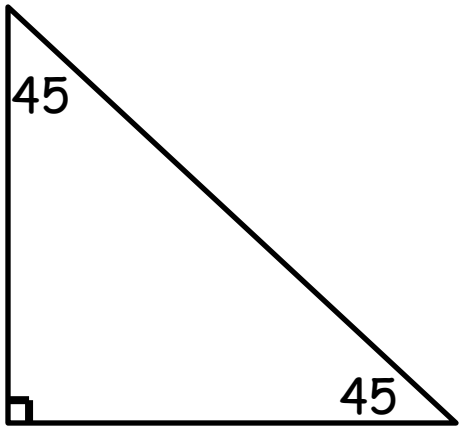
Geometry

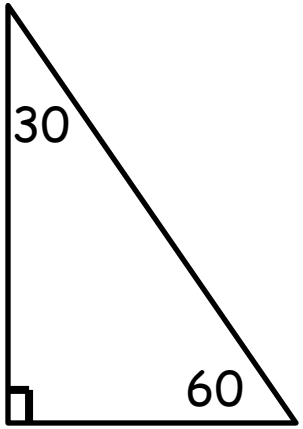
Special Right Triangles



Special Right Triangles

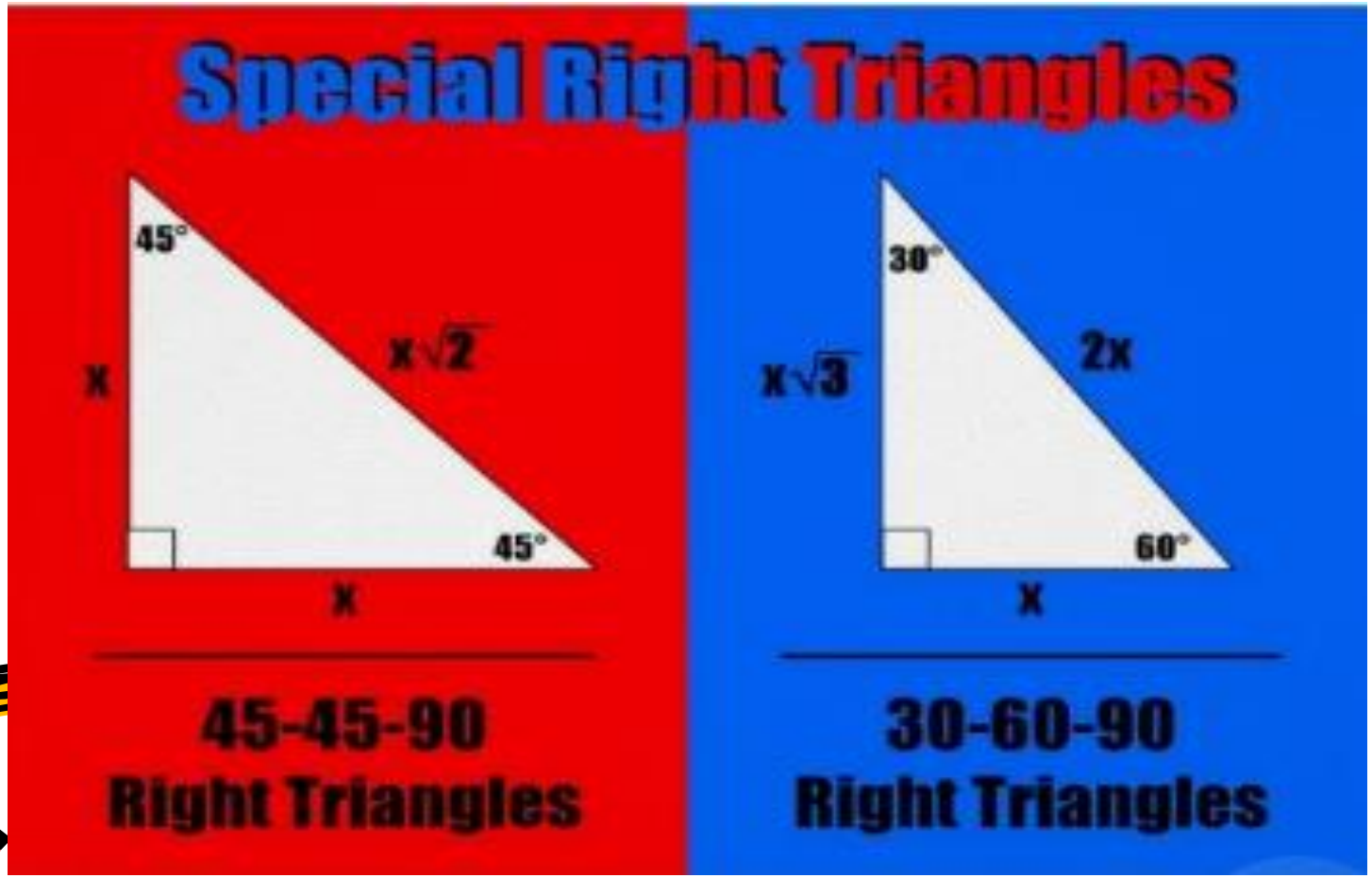
Right triangles posses common relationships among their angles and sides. Here we will focus on 2 special right triangles: 45-45-90 and 30-60-90





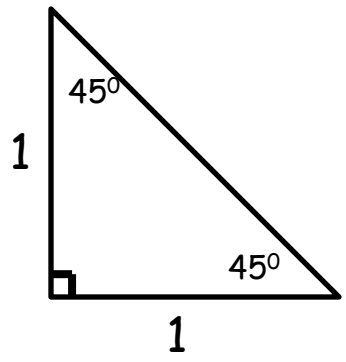
Special Right Triangles

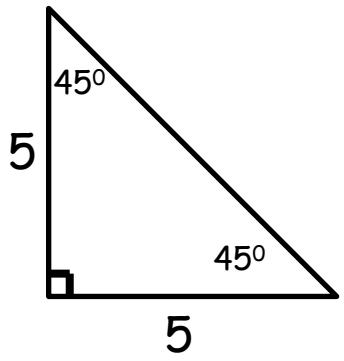
Right triangles posses common relationships among their angles and sides. Here we will focus on 2 special right triangles: 45-45-90 and 30-60-90

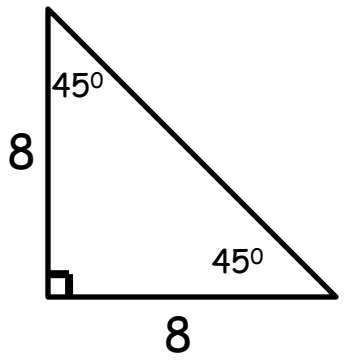


45 - 45 - 90 triangle

45-45-90 refers to the angles measurements. Given 2 angles are equal, we know this is a right isosceles triangle!



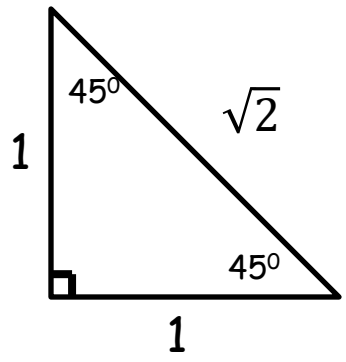


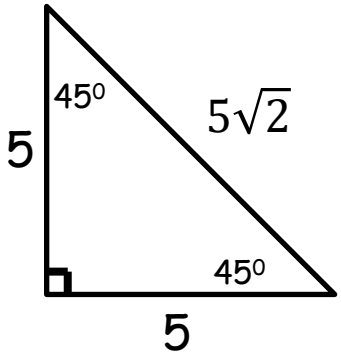


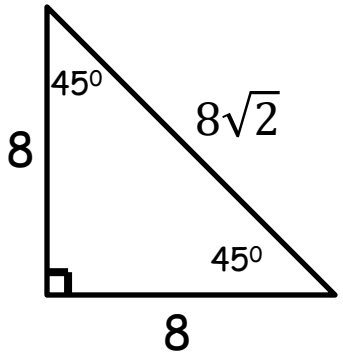
For each triangle, find the hypotenuse. Keep your measurements in simplest radical form.

45 - 45 - 90 triangle

45-45-90 refers to the angles measurements. Given 2 angles are equal, we know this is a right isosceles triangle.

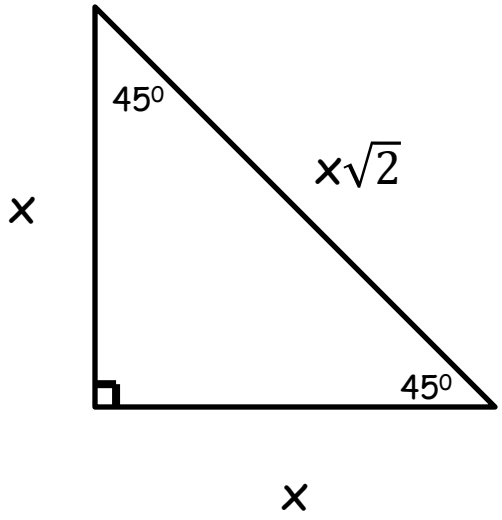


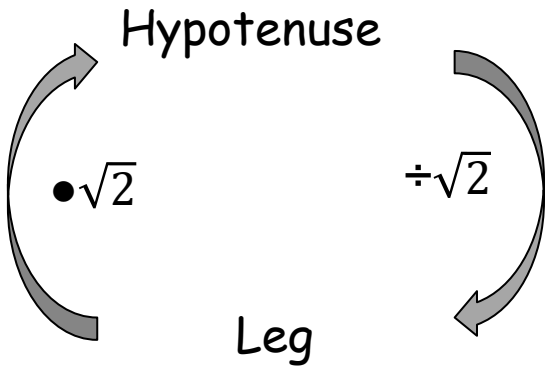




Note any patterns:

45 - 45 - 90 triangle



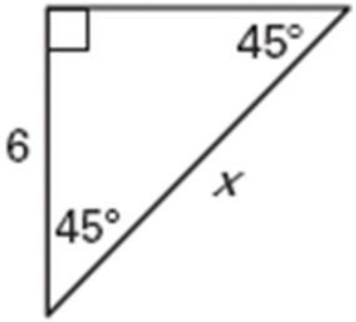


Hypotenuse = Leg $\sqrt{2}$

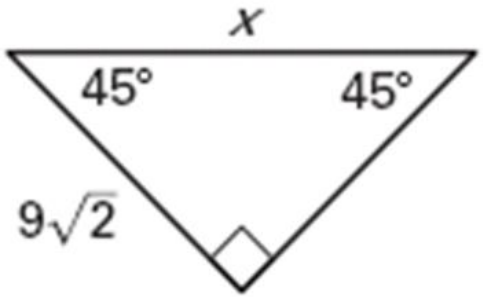
45 - 45 - 90 triangle

Find x. Keep your answers in simplest radical form.

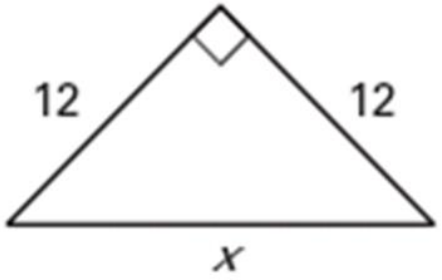
a)



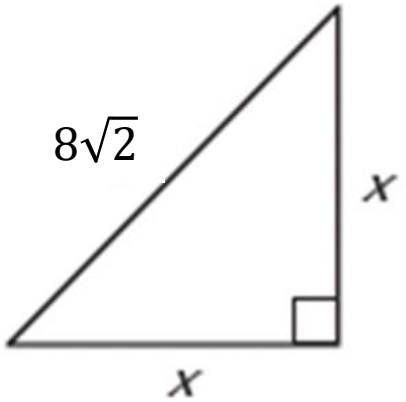
b)



c)

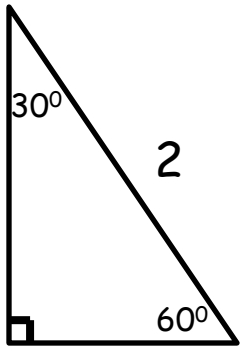


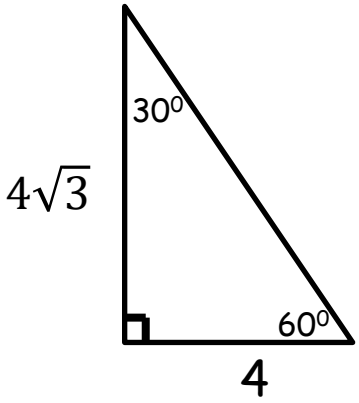
d)

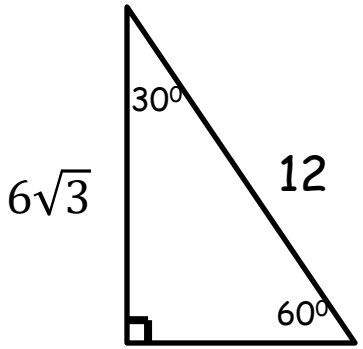


30 – 60 – 90 triangle

30-60-90 refers to the angles measurements.



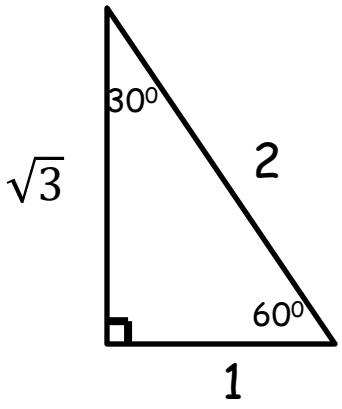


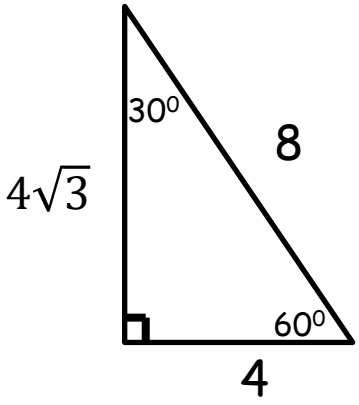


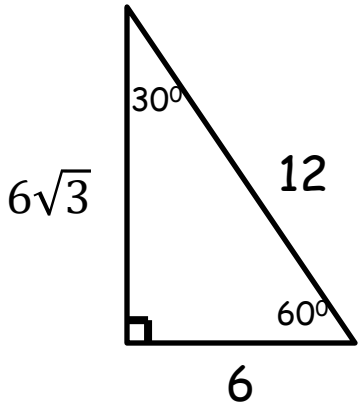
For each triangle, find the missing side. Keep your measurements in simplest radical form.

30 – 60 – 90 triangle

30-60-90 refers to the angles measurements.

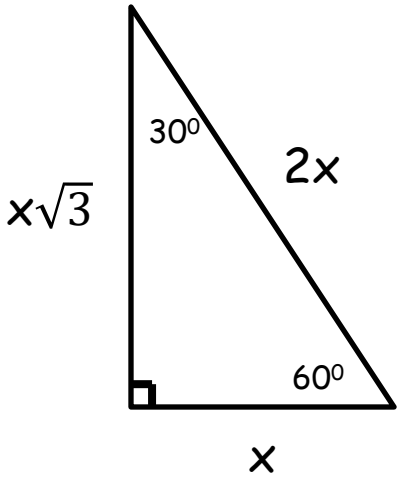


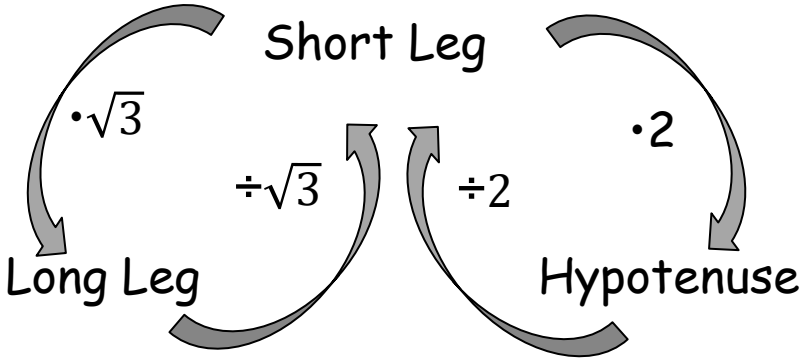




Note any patterns:

30 - 60 - 90 triangle





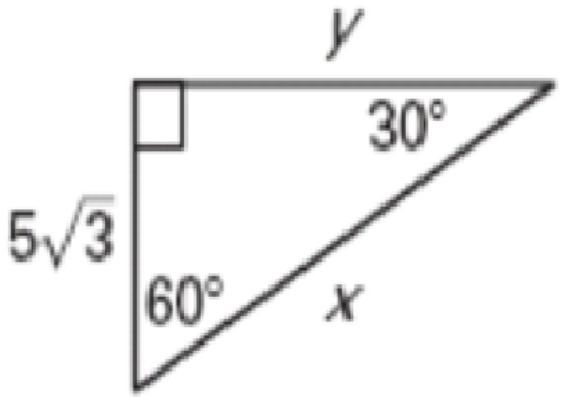
Hypotenuse = Short Leg •2

Long Leg = Short Leg •$\sqrt{3}$

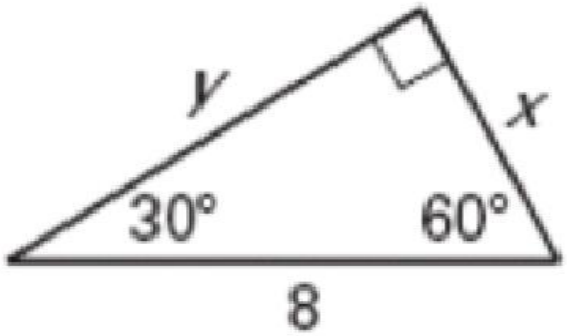
30 – 60 – 90 triangle

Find the sides. Answer in simplest radical form.

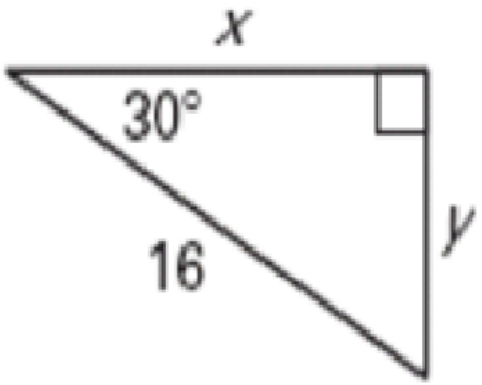
a)



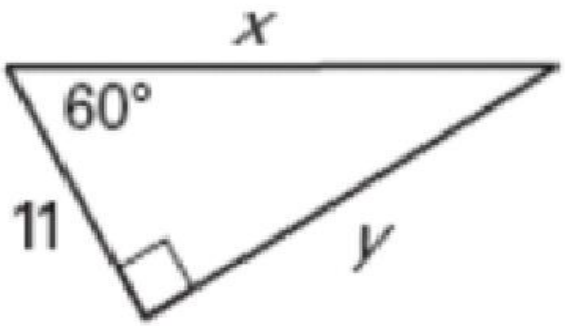
b)



c)



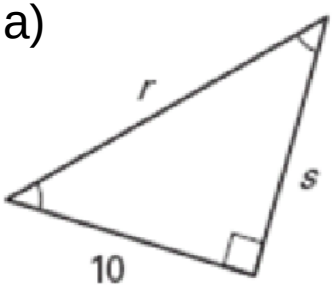
d)



Special Right Triangles

Find the sides. Answers in simplest radical form.

a)



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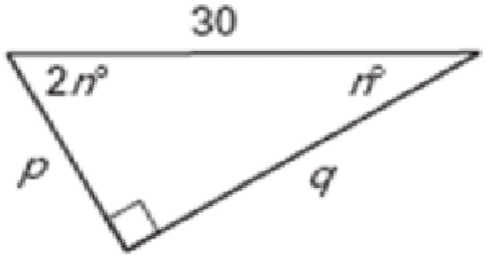

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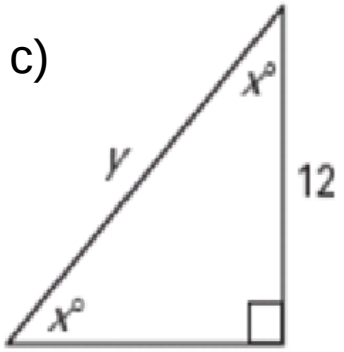
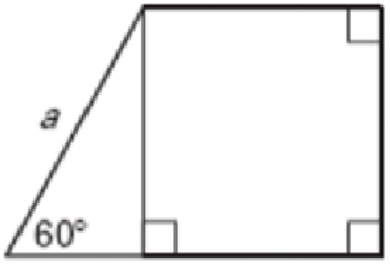


d)

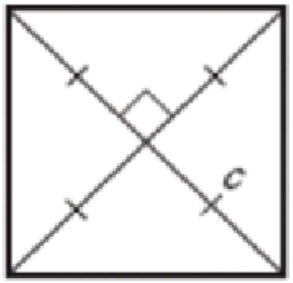
$6\sqrt{3}$



$6\sqrt{3}$

e)

$24\sqrt{2}$



f)