

trcore 112: Quiz 3

You may find the following table helpful if you did not bring a calculator for the quiz.

x	30°	45°	60°	120°	135°	150°
$\cos(x)$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$	$-\frac{1}{2}$	$-\frac{\sqrt{2}}{2}$	$-\frac{\sqrt{3}}{2}$
$\sin(x)$	$\frac{1}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{3}}{2}$	$\frac{\sqrt{2}}{2}$	$\frac{1}{2}$
$\tan(x)$	$\frac{1}{\sqrt{3}}$	1	$\sqrt{3}$	$-\sqrt{3}$	-1	$-\frac{1}{\sqrt{3}}$

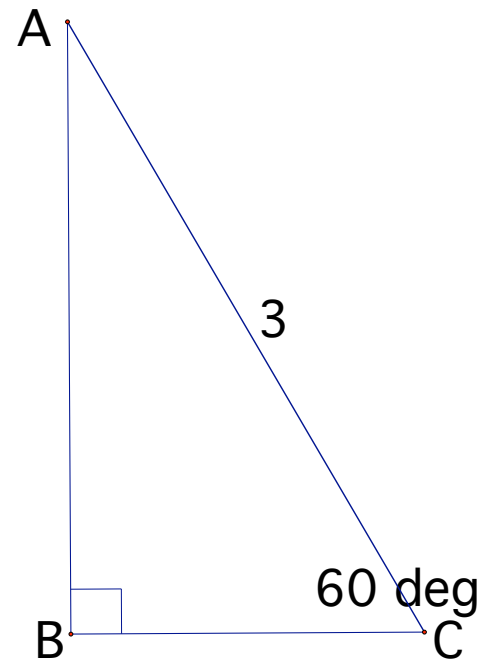
1. The right triangle ABC is shown below, where B is the right angle and angle C is 60 degrees. This diagram is *not* to scale. Find the following:

(a) [1] the measure of $\angle BAC$

(b) [2] the measure of side \overline{BC}

(c) [1] $\sin(A)$

(d) [2] $\sin(C)$

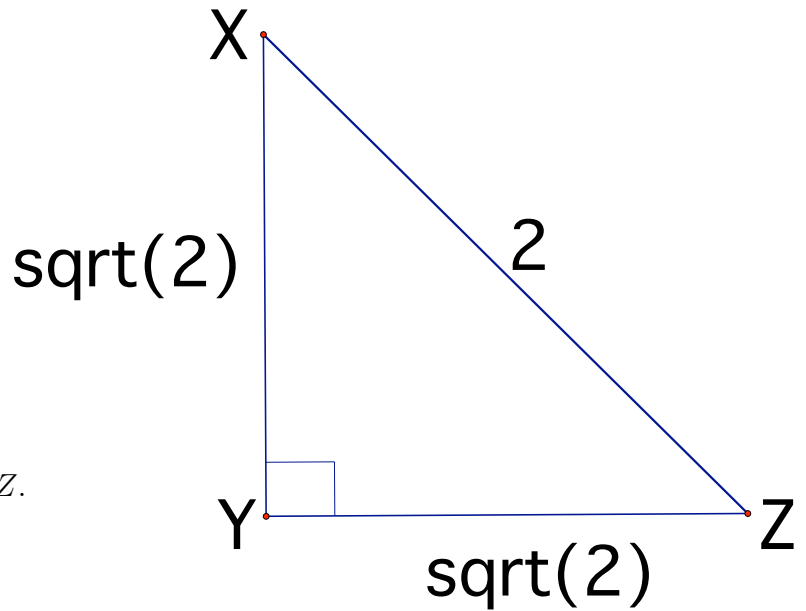


2. The right triangle XYZ is shown below, where Y is the right angle. This diagram is *not* to scale. Answer the questions below.

(a) [1] Find $\cos(Z)$

(b) [1] Find $\tan(Z)$

(c) [2] Find the measure of $\angle Z$.



3. [2] Identify a property, characteristic, attitude, method, or philosophy that both a scientist and a mathematician would agree on.

4. [2] Identify a property, characteristic, attitude, method, or philosophy that a scientist holds that is different than a mathematician's.

5. [1] What is it that Lang calls "point splitting"?