

Trigonometry CCP Summer Packet 2016 - 2017

The purpose of this summer work is to help prepare you for your upcoming math class. The work will tap into your prior knowledge and review past content, concepts, and skills. Our expectation is that you arrive on the first day of school able to demonstrate mastery of the material in this packet. In order to achieve this, please allow yourself plenty of time to work on the problems, use your resources (such as the review materials provided, Khan Academy, or the math faculty here at the school during summer school hours 7/18 – 8/25 9:00 – noon Monday-Thursday), and work each problem to completion.

You will use Khan Academy to complete the summer work for Trigonometry. Work will be due on Friday, September 2nd, and will be 3% of your first quarter grade. 10 points will be deducted for each day it is late. Each topic in Khan Academy will be graded as follows:

Summer Work Assignments	Grading	Evidence	Perseverance
Khan Academy	Two points will be awarded for each correct answer in a row. (See page 2 for more details.)	Students will complete five problems in a row correctly per each section assigned.	Students have an infinite amount of problems to attempt on Khan Academy. If students are struggling, they can access helpful videos on Khan and/or example problems.
In the event you do not have access to technology, you may complete the written packet. (page 3 to 15)	Two points will be awarded for the correct answer.	Students will complete five problems correctly per topic.	Students will show their work when solving a problem. If they are struggling, they will seek out extra help.

Your teacher might choose to give a non-graded assessment on the first week of school in order to target remediation strategies and requirements.

A note from your Trigonometry teacher:

This packet will help you to sharpen your skills and be ready for the first day of the 2016-2017 school year. These problems should not take too long. HAVE A GREAT SUMMER!!!!

Khan Academy – YOU MUST LOG IN TO HAVE KHAN ACADEMY GIVE YOU CREDIT FOR YOUR WORK.

How to Log Into Khan Academy to complete your summer work:

- If you do not have an account yet:
 1. Go to khanacademy.org
 2. Click on Start Learning Now
 3. Click on Sign in with Gmail
 4. Create an Account with your gapps account
 5. Type in the Search Engine Bar The topic you would like to complete or click on the link provided
- If you have an account already with your gapps email:
 1. Go to khanacademy.org
 2. Click on the log in button on the top right hand side of the screen
 3. Log in with your email and password
 4. Type in the Search Engine Bar the topic you would like to complete or click on the link provided

Summer Work Topics for Trigonometry: **YOU MUST LOG IN TO HAVE KHAN ACADEMY GIVE YOU CREDIT FOR YOUR WORK. SEE ABOVE.**

- a. Simplifying Square Roots <http://tinyurl.com/o9aegsd>
- b. Pythagorean Theorem <http://tinyurl.com/ptpn6km>
- c. Distance Formula <http://tinyurl.com/pmebbx3>
- d. Special Right Triangles <http://tinyurl.com/mncy46w>
- e. Complementary and Supplementary Angles <http://tinyurl.com/lc8hj3o>

*Khan Academy may ask for less than 5 correct in a row on some sections instead of five correct in a row. You may have to click on practice again in order to complete five problems for these sections.

Students **MUST** complete five problems in a row correctly for all of the topics above to earn full credit. Partial credit will be awarded as described below. If you struggle on any of the problems, please reference the videos for each topic and/or look for hints found on the right hand side of your screen when attempting a problem. Please note you do not have to complete all problems in one sitting. Khan Academy will remember where you left off. **Be sure to log-in every time you do additional work!!**

Grading for Khan Academy for each topic:

Credit can **only** be awarded for any work completed after June 1st, 2016.

- 0 correct in a row: 0 points
- 1 correct in a row: 4 points
- 2 correct in a row: 8 points
- 3 correct in a row: 12 points
- 4 correct in a row: 16 points
- 5 correct in a row: 20 points

Written Packet (ONLY DO THIS PACKET IF YOU DO NOT HAVE ACCESS TO TECHNOLOGY TO DO THE KHAN ACADEMY ASSIGNMENT) You are strongly encouraged to complete all problems. However, in order to earn full credit, only 5 of the problems in each topic need to be done correctly. SHOW ALL WORK!!

Simplifying Square Roots

1. Simplify $\sqrt{180}$.

$$\square \sqrt{\square}$$

2. Simplify $\sqrt{196}$.

$$\square \sqrt{\square}$$

3. Simplify $\sqrt{18}$.

$$\square \sqrt{\square}$$

4. Simplify $\sqrt{18}$.

$$\square \sqrt{\square}$$

5. Simplify $\sqrt{165}$.

$$\square \sqrt{\square}$$

6. Simplify $\sqrt{80}$.

$$\square \sqrt{\square}$$

7. Simplify $\sqrt{216}$.

$$\square \sqrt{\square}$$

8. Simplify $\sqrt{48}$.

$$\square \sqrt{\square}$$

9. Simplify $\sqrt{90}$.

$$\square \sqrt{\square}$$

10. Simplify $\sqrt{175}$.

$$\square \sqrt{\square}$$

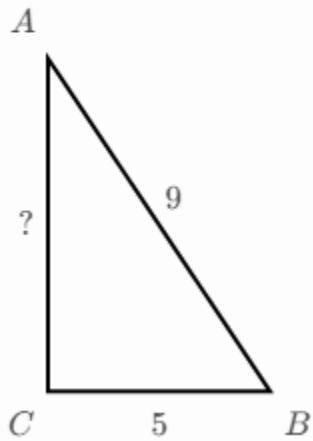
Pythagorean Theorem

1.

In the right triangle shown, $BC = 5$ and $AB = 9$.

What is AC ?

$$\boxed{} \sqrt{\boxed{}}$$

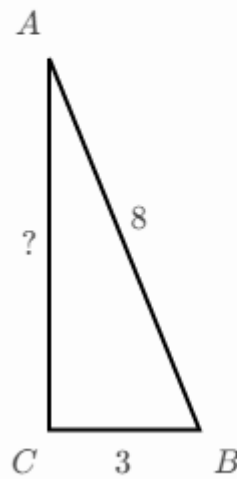


2.

In the right triangle shown, $BC = 3$ and $AB = 8$.

What is AC ?

$$\boxed{} \sqrt{\boxed{}}$$

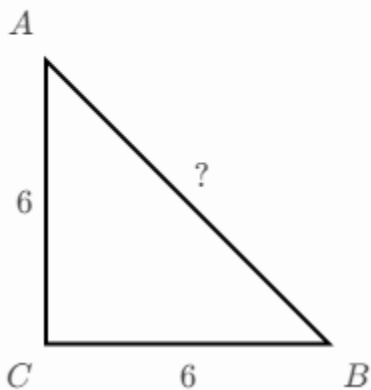


3.

In the right triangle shown, $AC = 6$ and $BC = 6$.

What is AB ?

$$\boxed{} \sqrt{\boxed{}}$$

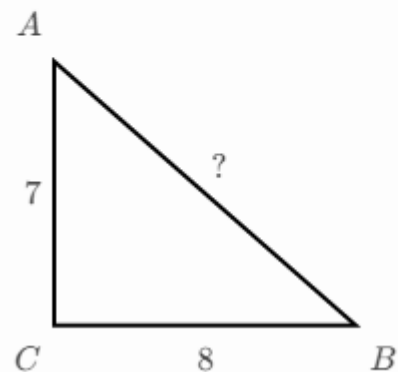


4.

In the right triangle shown, $AC = 7$ and $BC = 8$.

What is AB ?

$$\boxed{} \sqrt{\boxed{}}$$

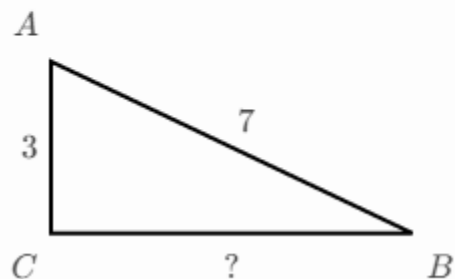


5.

In the right triangle shown, $AC = 3$ and $AB = 7$.

What is BC ?

$$\boxed{} \sqrt{\boxed{}}$$

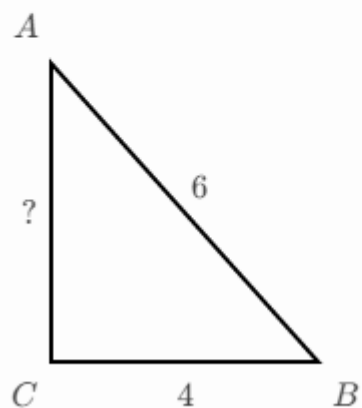


6.

In the right triangle shown, $BC = 4$ and $AB = 6$.

What is AC ?

$$\boxed{} \sqrt{\boxed{}}$$

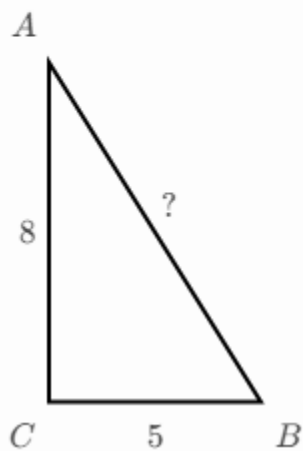


7.

In the right triangle shown, $AC = 8$ and $BC = 5$.

What is AB ?

$$\boxed{} \sqrt{\boxed{}}$$

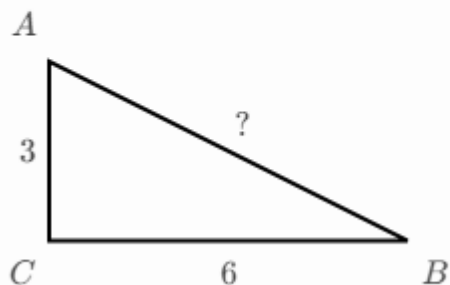


8.

In the right triangle shown, $AC = 3$ and $BC = 6$.

What is AB ?

$$\boxed{} \sqrt{\boxed{}}$$

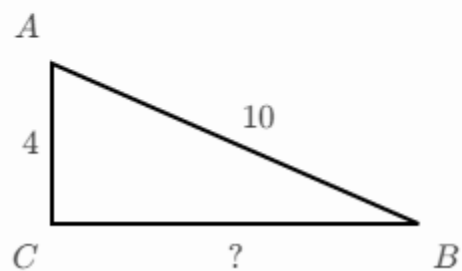


9.

In the right triangle shown, $AC = 4$ and $AB = 10$.

What is BC ?

$\sqrt{\text{$

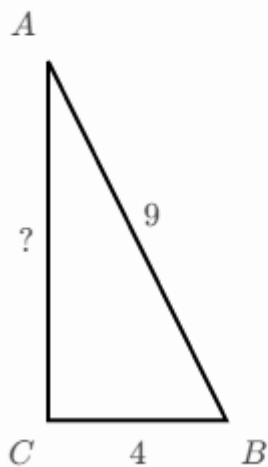


10.

In the right triangle shown, $BC = 4$ and $AB = 9$.

What is AC ?

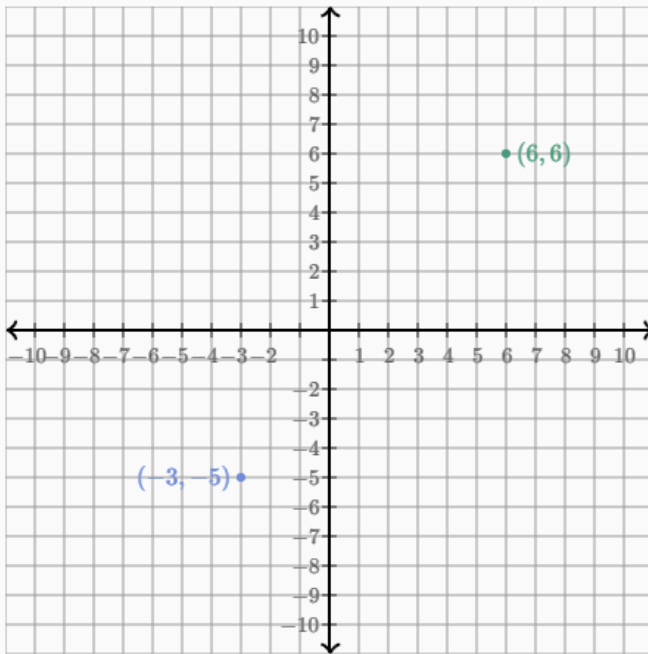
$\sqrt{\text{$



Distance Formula

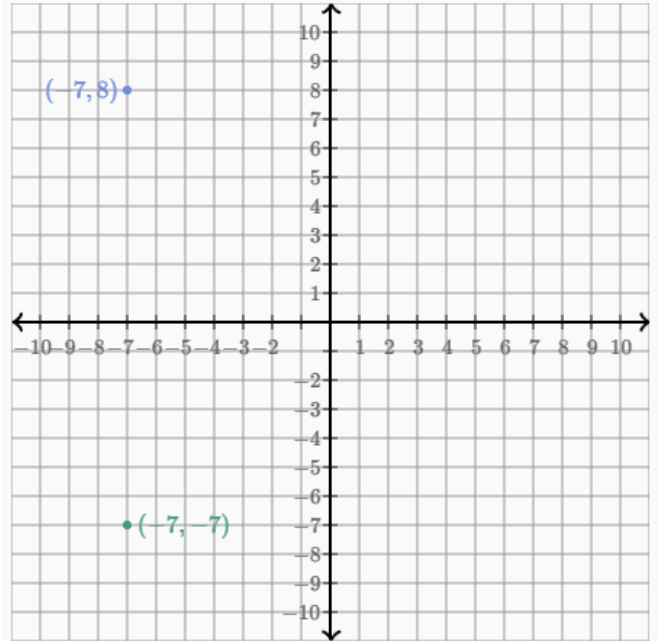
1. Find the distance between the points $(-3, -5)$ and $(6, 6)$.

$$\square \sqrt{\square}$$



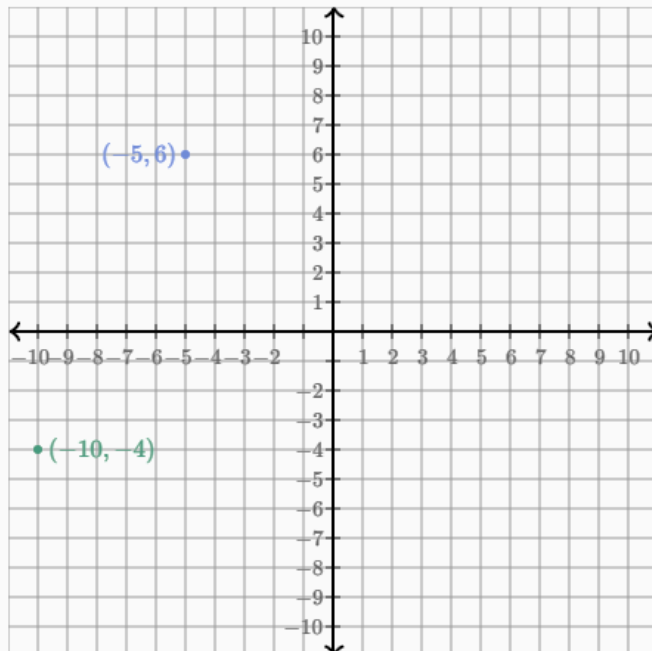
2. Find the distance between the points $(-7, 8)$ and $(-7, -7)$.

$$\square \sqrt{\square}$$



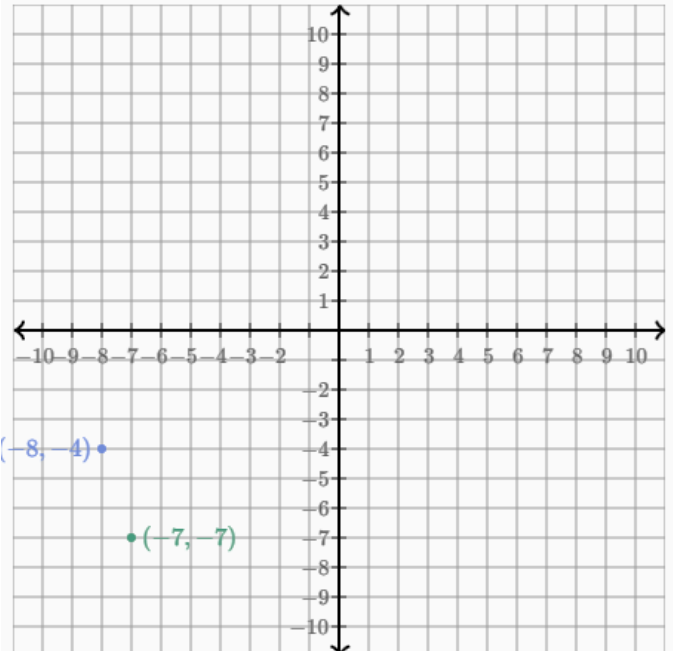
3. Find the distance between the points $(-5, 6)$ and $(-10, -4)$.

$$\square \sqrt{\square}$$



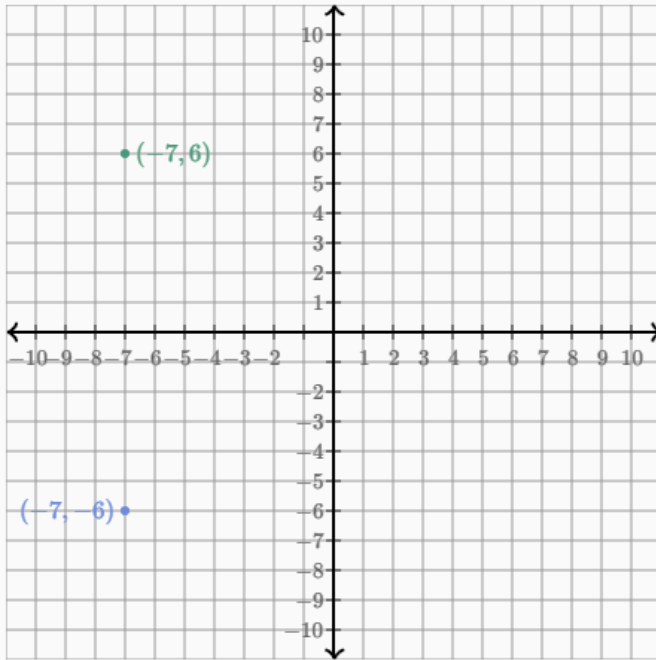
4. Find the distance between the points $(-8, -4)$ and $(-7, -7)$.

$$\square \sqrt{\square}$$



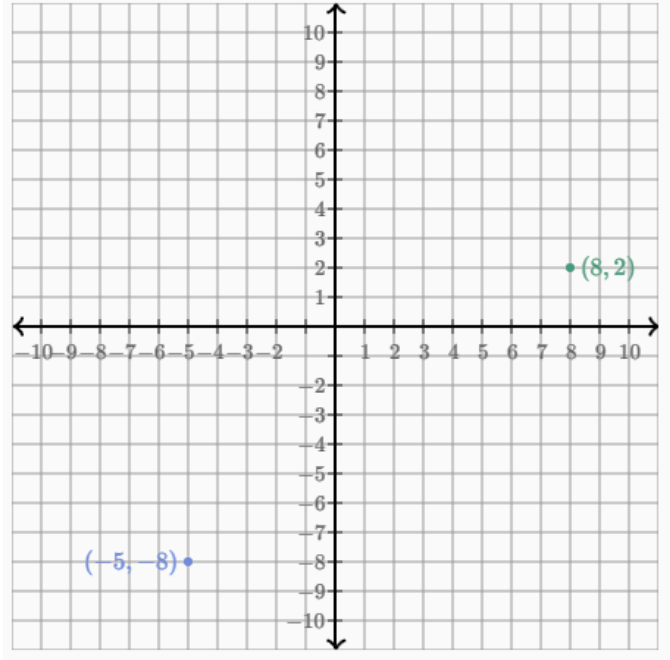
5. Find the distance between the points $(-7, -6)$ and $(-7, 6)$.

$$\square \sqrt{\square}$$



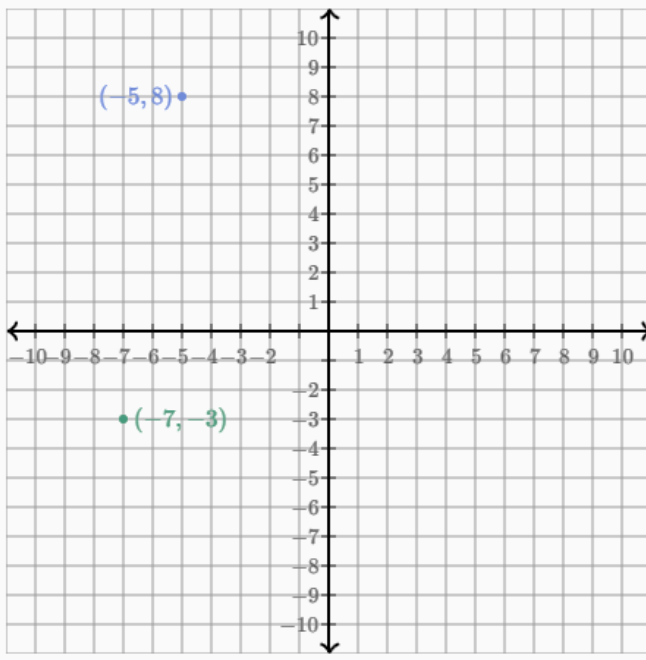
6. Find the distance between the points $(-5, -8)$ and $(8, 2)$.

$$\square \sqrt{\square}$$



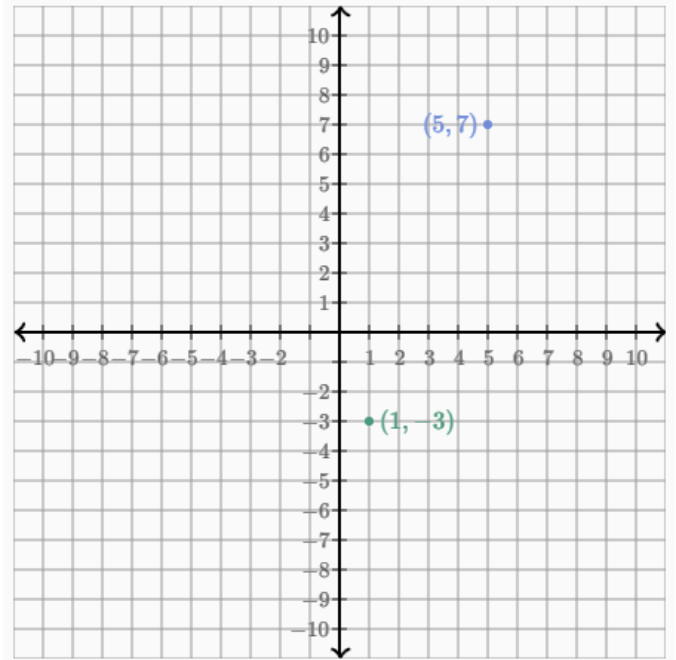
7. Find the distance between the points $(-5, 8)$ and $(-7, -3)$.

$$\square \sqrt{\square}$$



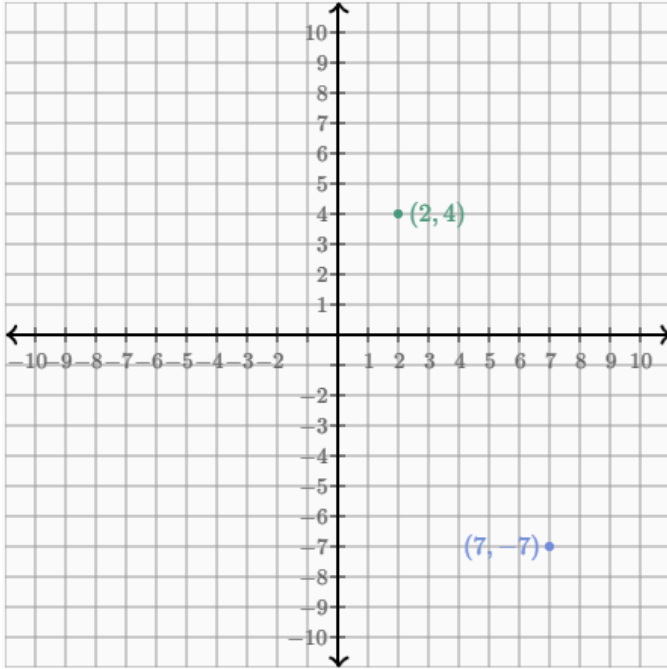
8. Find the distance between the points $(5, 7)$ and $(1, -3)$.

$$\square \sqrt{\square}$$



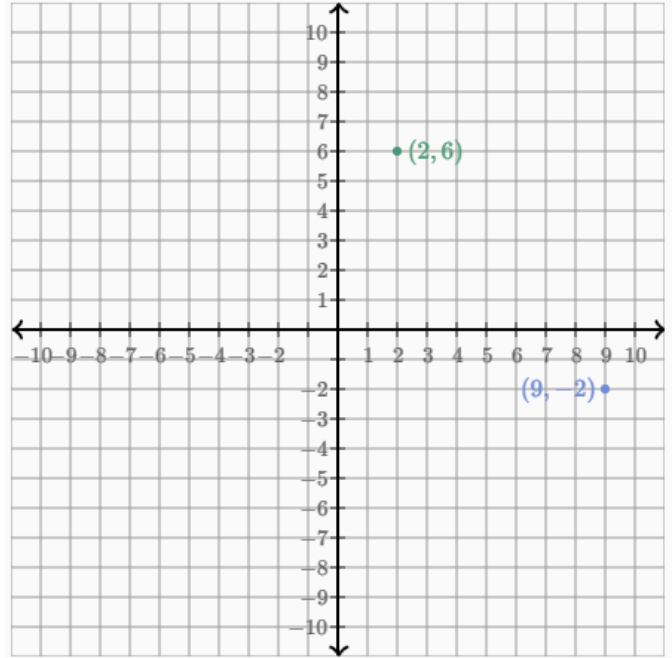
9. Find the distance between the points $(7, -7)$ and $(2, 4)$.

$$\square \sqrt{\square}$$



10. Find the distance between the points $(9, -2)$ and $(2, 6)$.

$$\square \sqrt{\square}$$

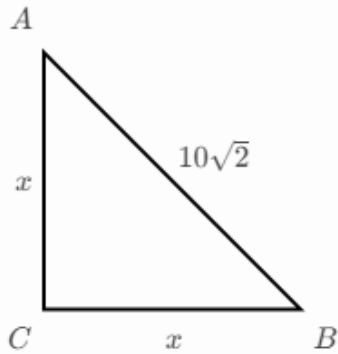


Special Right Triangles

1. In the right triangle shown, $AC = BC$ and $AB = 10\sqrt{2}$.

How long are each of the legs?

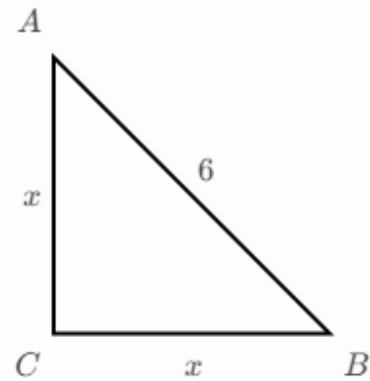
$$\square \sqrt{\square}$$



- In the right triangle shown, $AC = BC$ and $AB = 6$.

How long are each of the legs?

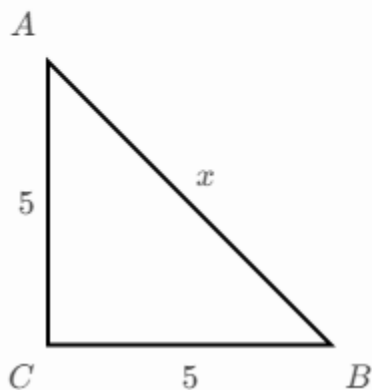
$$\square \sqrt{\square}$$



3. In the right triangle shown, $AC = BC = 5$.

What is AB ?

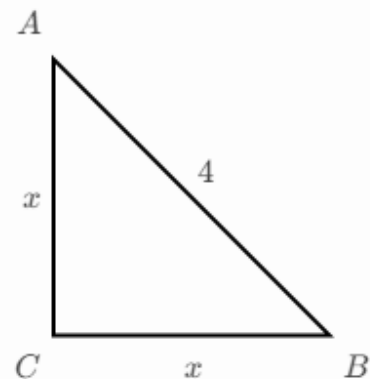
$$\square \sqrt{\square}$$



4. In the right triangle shown, $AC = BC$ and $AB = 4$.

How long are each of the legs?

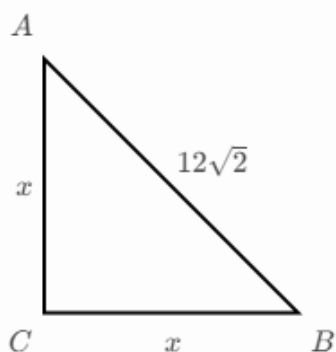
$$\square \sqrt{\square}$$



5. In the right triangle shown, $AC = BC$ and $AB = 12\sqrt{2}$.

How long are each of the legs?

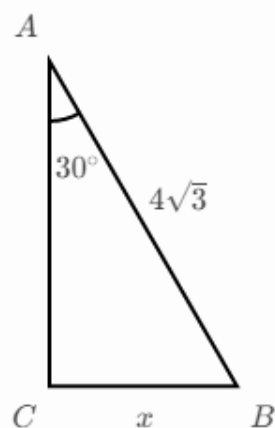
$\sqrt{\text{$



6. In the right triangle shown, $\angle A = 30^\circ$ and $AB = 4\sqrt{3}$.

How long is BC ?

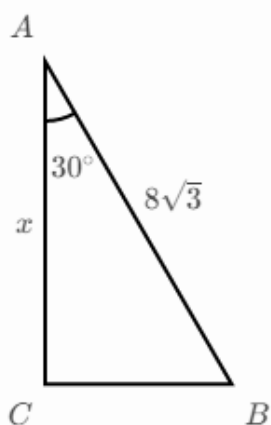
$\sqrt{\text{$



7. In the right triangle shown, $\angle A = 30^\circ$ and $AB = 8\sqrt{3}$.

How long is AC ?

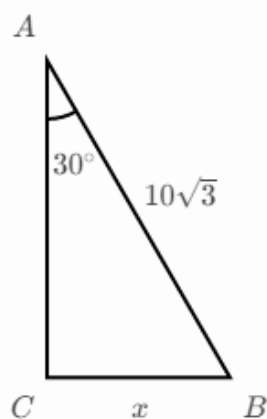
$\sqrt{\text{$



8. In the right triangle shown, $\angle A = 30^\circ$ and $AB = 10\sqrt{3}$.

How long is BC ?

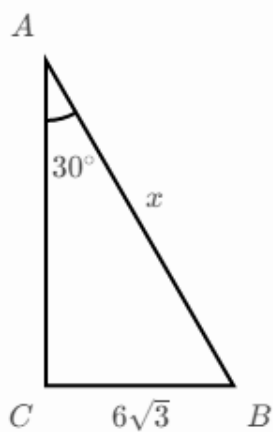
$\sqrt{\text{$



9. In the right triangle shown, $\angle A = 30^\circ$ and $BC = 6\sqrt{3}$. 10. In the right triangle shown, $\angle B = 60^\circ$ and $AC = 12$.

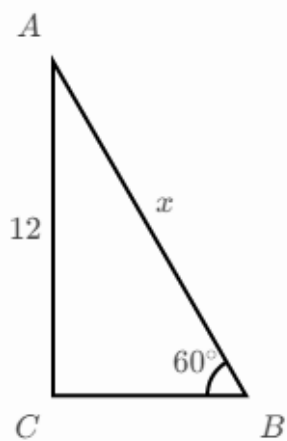
How long is AB ?

$$\square \sqrt{\square}$$



How long is AB ?

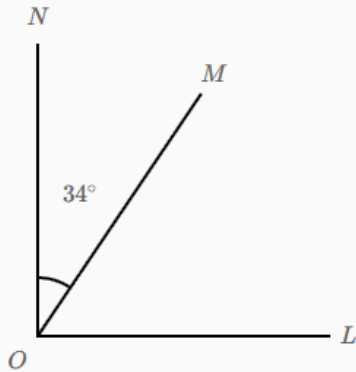
$$\square \sqrt{\square}$$



Complementary and Supplementary Angles

1. If $\angle LON$ is a right angle and $m\angle MON = 34^\circ$, what is $m\angle LOM$?

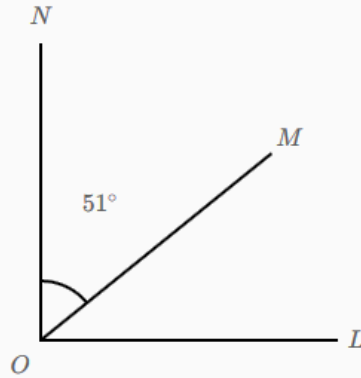
°



NOTE: Angles not necessarily drawn to scale.

2. If $\angle LON$ is a right angle and $m\angle MON = 51^\circ$, what is $m\angle LOM$?

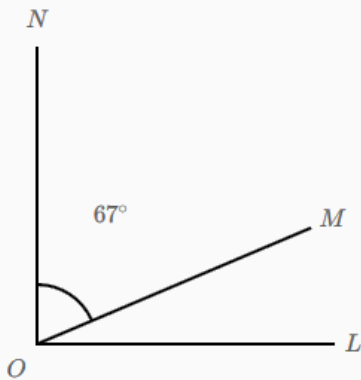
°



NOTE: Angles not necessarily drawn to scale.

3. If $\angle LON$ is a right angle and $m\angle MON = 67^\circ$, what is $m\angle LOM$?

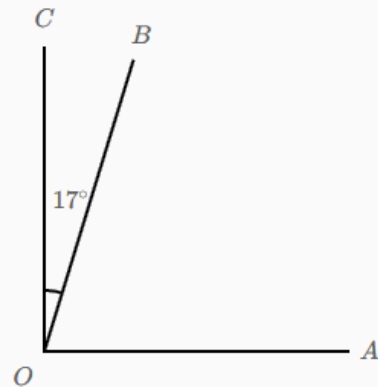
°



NOTE: Angles not necessarily drawn to scale.

4. If $\angle AOC$ is a right angle and $m\angle BOC = 17^\circ$, what is $m\angle AOB$?

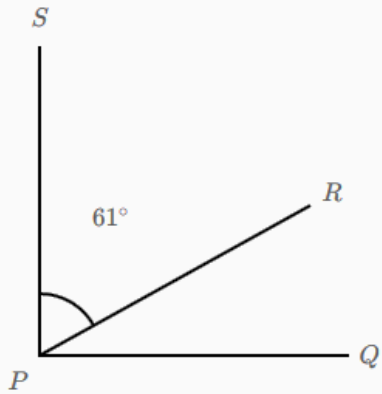
°



NOTE: Angles not necessarily drawn to scale.

5. If $\angle QPS$ is a right angle and $m\angle RPS = 61^\circ$, what is $m\angle QPR$?

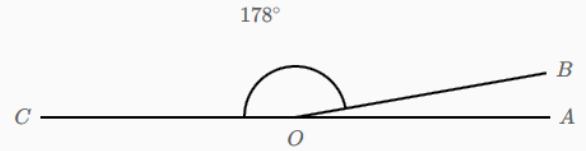
°



NOTE: Angles not necessarily drawn to scale.

6. If $m\angle AOC = 180^\circ$ and $m\angle BOC = 178^\circ$, what is $m\angle AOB$?

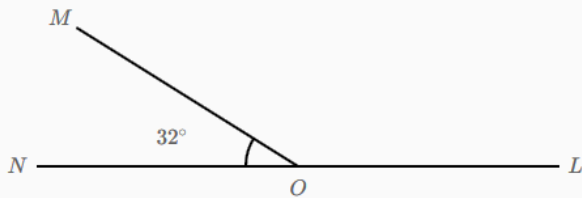
°



NOTE: Angles not necessarily drawn to scale.

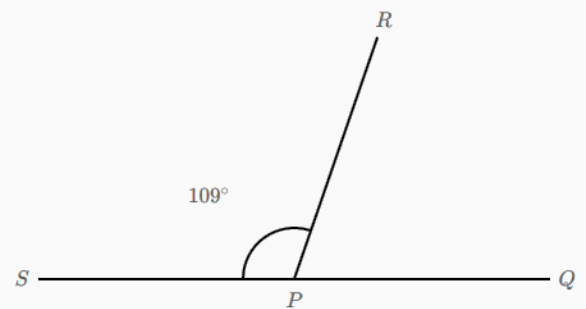
7. If $m\angle LON = 180^\circ$ and $m\angle MON = 32^\circ$, what is $m\angle LOM$?

°



8. If $m\angle QPS = 180^\circ$ and $m\angle RPS = 109^\circ$, what is $m\angle QPR$?

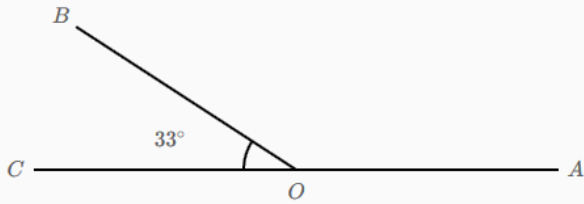
°



NOTE: Angles not necessarily drawn to scale.

9. If $m\angle AOC = 180^\circ$ and $m\angle BOC = 33^\circ$, what is $m\angle AOB$?

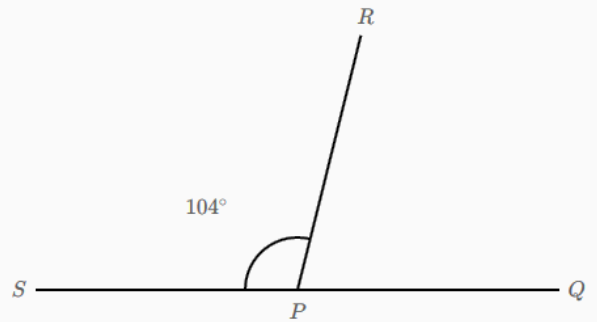
°



NOTE: Angles not necessarily drawn to scale.

10. If $m\angle QPS = 180^\circ$ and $m\angle RPS = 104^\circ$, what is $m\angle QPR$?

°



NOTE: Angles not necessarily drawn to scale.