

How To Use A Speed Square - The Beginners' Guide - Anika's DIY Life

A simple guide for beginners to learn how to use a Speed Square or carpenter's square in woodworking. Learn about all the features and uses!

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A simple guide for beginners to learn **how to use a Speed Square** or [carpenter's square](#) in **woodworking**. Learn about all the features and uses!



A [Speed Square](#) or [carpenter's square](#) is one of the most basic and essential tools in woodworking. It is extremely inexpensive, accurate, and has a wide variety of uses!

You often see the [Speed Square](#) being used as a way to make sure everything is perpendicular and square while building. That is just a scratch on the surface of everything that tool is capable of!

As a beginner, it can be overwhelming looking at the wide variety of markings!

Today I am breaking it down for you in detail to show you exactly what everything means AND how to use it so you can put that triangular tool work!

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What is a Speed Square

A [Speed Square](#) is a triangular carpenter's tool. It is also commonly known as a rafter square or a [carpenter's square](#).

The term "[Speed Square](#)" is trademarked by Swanson Tool Co., Inc. but is commonly used as a generic name.

If you are in the market to buy a [carpenter's square](#), I would highly recommend getting [the Swanson Speed Square](#). It is jam-packed with all the features which might be missing in other brands!

What is a speed square used for?

The main purpose of the [Speed Square](#) is to lay out lines very quickly and accurately. However, you can also find and draw angles and circles, adjust or guide a saw, and even use it as a level!

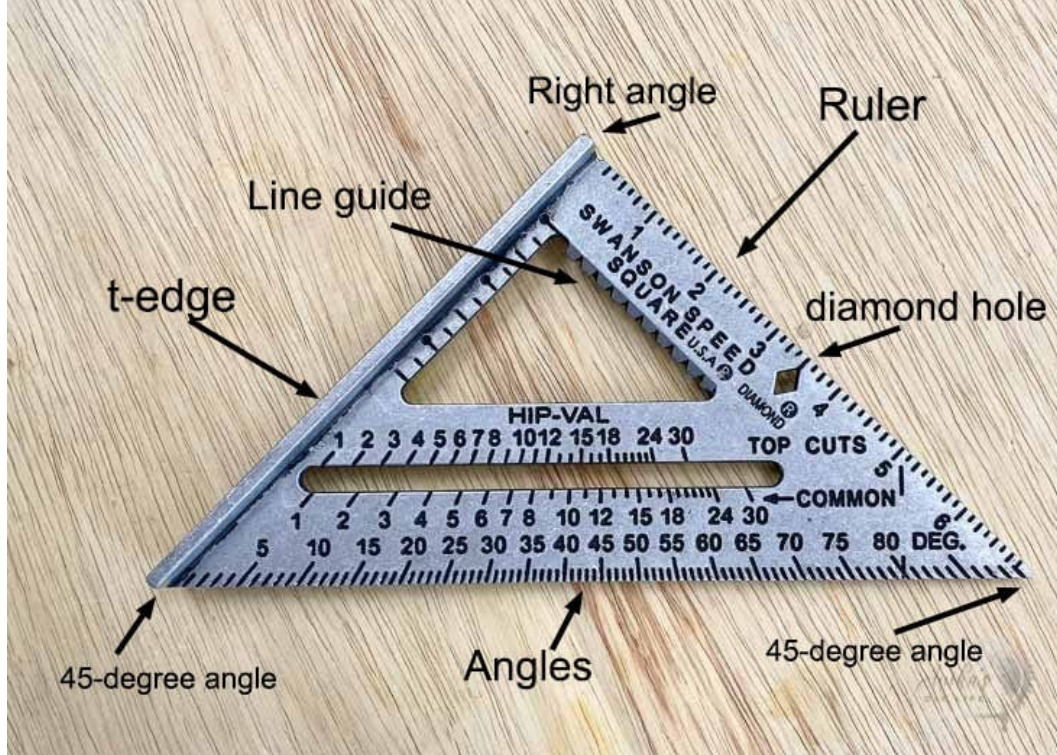
Before we get into details of how to do all this, let's get to know the [Speed Square](#) and talk about all its uses.

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Features of the Speed Square

A [Speed Square](#) is packed with features that make for uses well beyond the most obvious one – using it as a way to square boards. Below are the basic features which are **most relevant to woodworking**.



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1. Ruler

Along one of the outside edges, there are markings from 1 through 6. This is the [ruler](#) side. It's useful for quick measurements. **It is limited to six inches** so you can only use it for smaller measurements but it can be a quick reference when working with it.

2. t-edge

The t-shaped edge or the square lip is probably the most used feature of a [Speed Square](#). It can be bumped up against one edge of a board, and you can scribe a straight line with a pencil. Plus, you also guide a saw blade with it!

3. Right Angle

The most obvious use of the [Speed Square](#) is to use it at the right angle. The 90-degree angle is easy to use without needing a protractor. You can trace around it, use it to confirm cuts, and even check your assembly for perfect corners quickly. The most important use – check your saws to make sure the blade is square.

4. Angles

The side opposite the right angle is marked with lines and the numbers 10 to 80 or 0 to 90 – depending on your [speed square](#)'s manufacturer. This side is how you can use your [Speed Square](#) for

angles. I will go into detail about how to use it to measure or mark angles below.

5. Diamond-Shaped Hole

This hole is 3½ inches from the end and makes for a helpful quick measurement since the width of two-by-fours is actually 3½ inches, not 4 inches.

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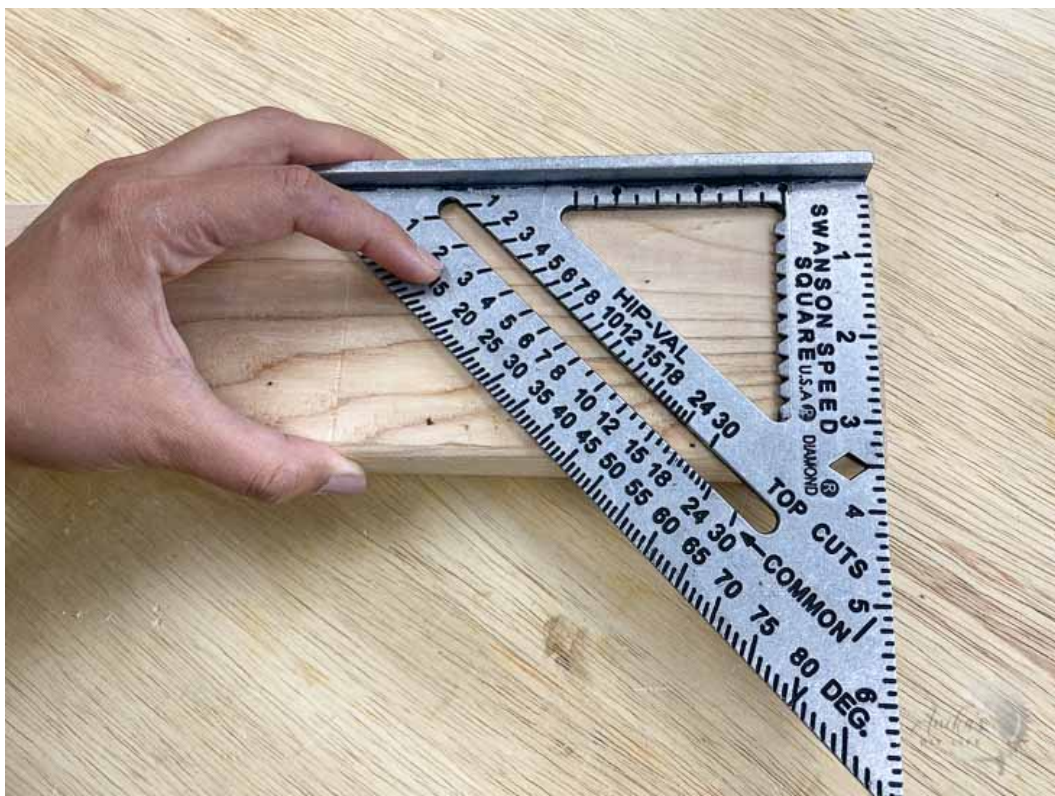
Uses of a Speed Square

The above list makes it clear that the [Speed Square](#) can be used in so many ways! Now let's dive into exactly how to use it for each purpose.

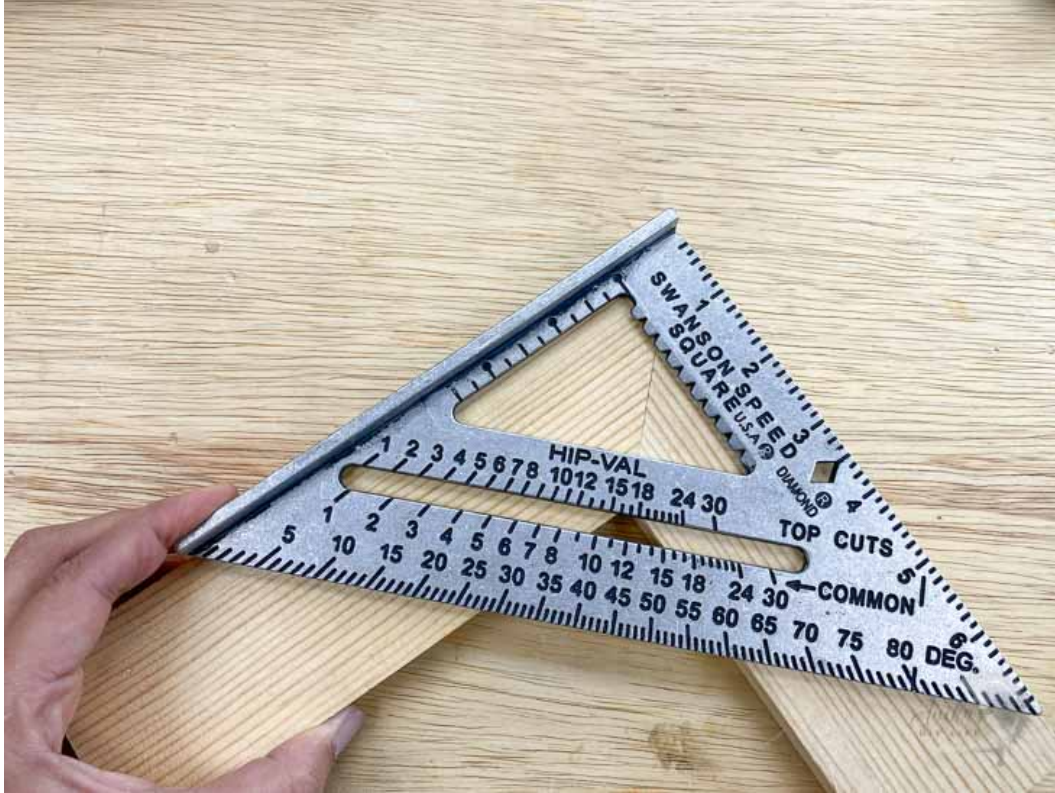
1. Check for square

As the name suggests and the first thing that probably comes to mind – a [speed square](#) can be used for quickly **checking for square** between workpieces.

Also, it is great to check if the ends of a board are square.



Below, I am checking to make sure that the mitered joint is perfectly square.



2. Use as a Saw Guide

A [Speed Square](#) makes a quick and accurate fence when using a circular saw to cut boards.

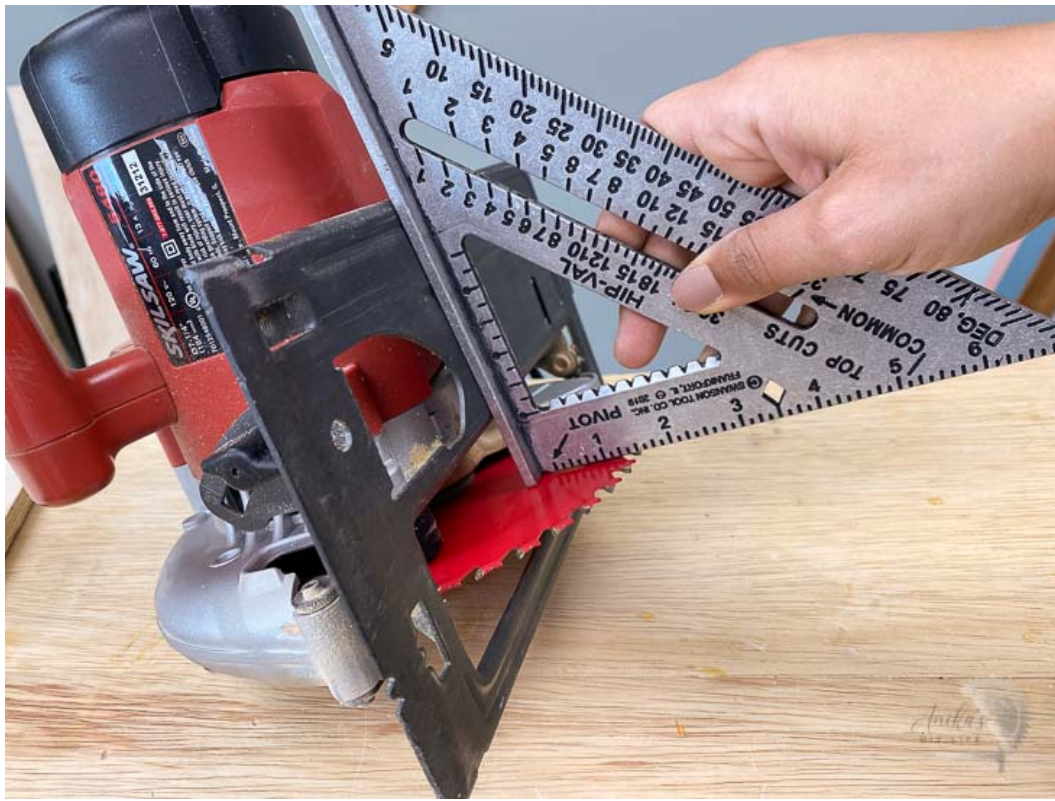
- Hook the t-shaped lip on the outer edge of the board.
- Line up the shoe of the saw against the straight edge parallel to the cut.
- Make the cut!



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3. Adjust Saws

One of the most important parts of building professional quality furniture is to make sure all your pieces are cut perfectly square. Hence, it is important to ensure that the saw blades are “square” – which means they are perfectly 90-degrees to the plane on which you place your boards.



For example, to adjust a circular saw – rest one side of the [Speed Square](#) against the side of the blade. Rest the against the bottom of the saw. Both sides should line up with no gap. If there is a gap, adjust the blade till it disappears.

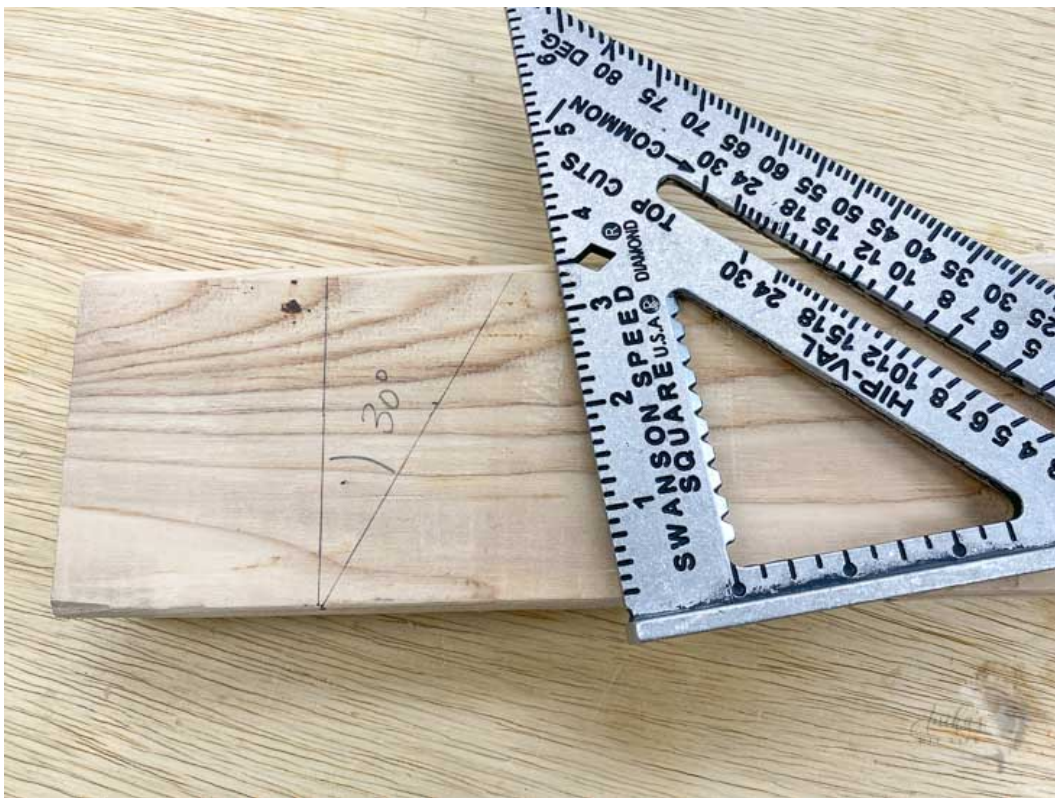
4. Measuring Angles with a Speed Square

Measuring and marking angles with a [Speed Square](#) make it so much easier to ensure that the mitered cross-cuts are perfect! The right angle and the 45-deg angles are easy to see! Here is how you use it to measure or mark any angle you want –

- Line up the lip of the [Speed Square](#) with the edge of the board so the pivot point is at the starting point of the cut.
- Pivot away in the direction of the angle you need until that specific angle (in our case below – it is the 30-degree line) marking lines up with the edge of the board.



- Draw the line along the edge. This is the angled line!



Below is my TikTok video showing you measuring angles in action

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A similar technique can also be used to measure an angle.

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5. Drawing Circles with a Speed Square

Yes, you can use a [speed square](#) to make circles!

I think it is the easiest to make these using [the Swanson Speed Square](#) because it has the notches for the markings. You can use the outer edge to make circles up to 12 inches, although, it might be a bit tricky.



- Place a nail or screw at the pivot for the [speed square](#) to rotate
- The notch in the [speed square](#) at the pivot point can be hooked on to the nail.
- On the [ruler](#) side of the [speed square](#) – place a pencil at the radius of the circle you need.
- Walk the [speed square](#) around as you rotate the [speed square](#) around.

That will help make a simple circle.

6. How to mark boards for ripping

If you need to draw a straight line across a board to rip it down, it is super simple to do so with a [Speed Square](#)!

- Place the [Speed Square](#) with the t-edge over the edge.
- Place a pencil on the measurement mark on the [ruler](#)'s side.
- Slide the [speed square](#) down the length of the board and draw a line with the pencil as you go.



Tip – Be sure to use a sharp pencil (not a carpenter’s pencil) for this. Many speed squares feature a sawtooth along the [ruler](#) edge which is very helpful.

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7. Leveling

Using a [Speed Square](#) for leveling is a little more complicated than using a level but it can be done in a pinch. You’ll need a [plumb bob](#) or a string and nut.

- Place the square on the material with the pivot point facing up.
- Then take the [plumb bob](#) or string and nut and lay it across the [speed square](#).
- If it is level, the string will rest on the 45-degree mark. If not, you’ll know precisely how unlevel the item is.

8. Finding Roof Pitch

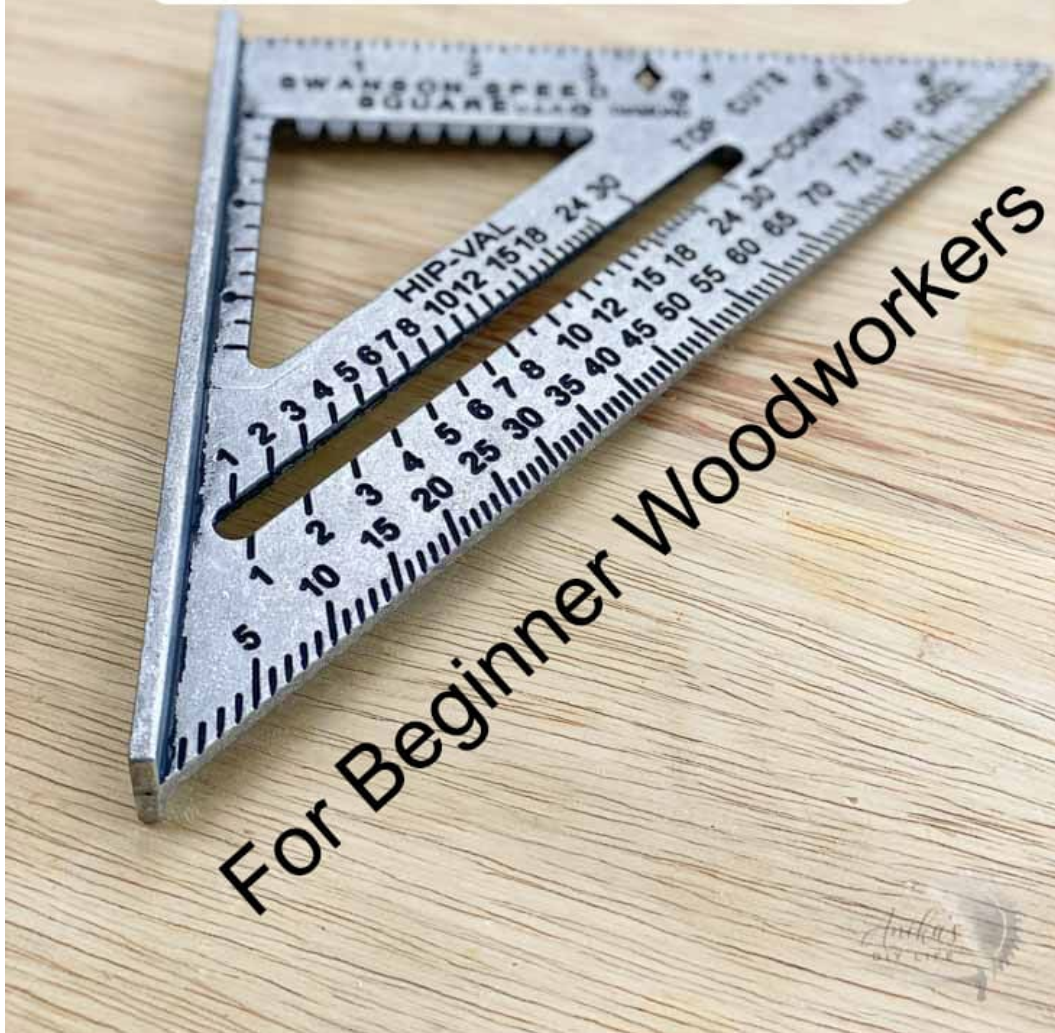
While you may not use a [speed square](#) for roofing, it can be used. This is an excellent article to understand [how it works to find the roof pitch](#).

So there you have it.

SO MANY things you can do with that simple triangular tool! Let me know which of these was new to you!

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