

### Carpentry NTQF Level II

# Learning Guide #51

Unit of Competence: Install Lining, Paneling and

Molding

Module Title: Installing Lining, Paneling and

Molding

LG Code: EIS CRP2 M12 LO4-LG-51

TTLM Code: EIS CRP2 M12 TTLM 0919v1

#### LO: 4 Cut and fix standard architrave moldings

ſ	TTLM :install door and window	TVET Program: carpentry	
	TTLM :install door and window Version 1	Author: FTA	Page 1



TIVET AN		
Instruction Sheet	Learning Guide #48	

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics.

- marking, cutting and fitting Standard architraves to length and specifications
- marking, cutting and fitting Skirting to length and specifications,
- Miter joints flush to face.
- marking, cutting and fitted Scribed joints
- Scotia return end is cut to profile shape and length
- Marking and fixing Standard pelmet molding sections to length,.
- setting out Raked molding to position and shaping molds

This guide will also assist you to attain the learning outcome stated in the cover page. Specifically, upon completion of this Learning Guide, you will be able to –

- marking, cutting and fitting Standard architraves to length and specifications
- marking , cutting and fitting Skirting to length and specifications,
- Miter joints flush to face.
- marking, cutting and fitted Scribed joints
- Scotia return end is cut to profile shape and length
- Marking and fixing Standard pelmet molding sections to length,.
- setting out Raked molding to position and shaping molds

TTLM :install door and window	TVET Program: carpentry	
LLM :install door and window     Version 1	Author: FTA	Page 2



#### Learning instruction

- ✓ Read the specific objectives of this Learning Guide.
- ✓ Read the information written in the "Information Sheets 1". Try to understand and familiarize what are being shown and discussed. Ask your teacher for assistance if you have hard time understanding them.
- ✓ Accomplished and submit "Self-checks 1" for evaluation.
- ✓ If you earned a satisfactory evaluation for "self-check 1" then proceed to "Operation Sheet 1". However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Information Sheet 1.
- ✓ Read the "Operation Sheet 1" and try to understand the procedures discussed.
- ✓ Accomplish and submit "Operation Sheet 1" for evaluation.
- ✓ If you earned a satisfactory evaluation for one "Operation Sheet 1" then proceed to the next "Information Sheet". However, if your rating is unsatisfactory, see your teacher for further instructions or go back to Operation Sheet where you get unsatisfactory evaluation.
- ✓ Continue to the next "Information Sheet" and follow instruction for learning activities
- ✓ After all "Self Check" and "Operation Sheet" is accomplished and evaluated proceed to "LAP Test".
- Your teacher will evaluate your output either satisfactory or unsatisfactory. If unsatisfactory, your teacher shall advice you on additional work. But if satisfactory you can proceed to the next topic.

TTLM :install door and window	TVET Program: carpentry	
LILM :install door and window   Version 1	Author: FTA	Page 3



Informa	ation	Sheet	17
	461011	OHIOCE	

marking, cutting and fitting Standard architraves to length and specifications

#### 17.1 Architrave moulding

Architrave is the molding fitted around the frameworks of internally doors, windows, and loft hatches normally it is decorative timber - by fitting architrave, the joint between the wall/ceiling and the timber frameworks are hidden. Architrave will also hide any shrinkage and movement between the two which subsequently occurs.

Architrave should be fitted to the framework after all the wall/ceiling surfaces have been finished and before decoration, fitting skirting boards and doors.

Three lengths of architrave are normally required for each side of a door and for the inside of a window, - two vertical side pieces and one horizontal head piece. If a door or window frame is hard up against a return wall, then only one vertical piece may be required. A loft hatch, normally requires four pieces (one for each side) of architrave with miters at both ends of all four pieces.

The end of each piece of architrave, where it joins another piece, is usually mitered - typically with a square topped framework, the ends will meet at 90 degrees so the miter cuts on each piece will be 45 degrees (half the framework angle). However, sometimes, the framework may not be square, in which case, the angles will need to be measured and the appropriate angle used to cut the miters.

Ī	TTLM :install door and window	TVET Program: carpentry	
	TTLM :install door and window Version 1	Author: FTA	Page 4



Push side architrave up against head piece

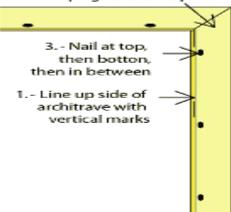


Figure 1 push side architrave

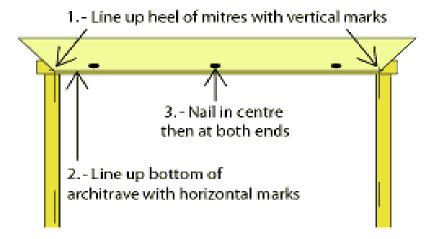


Figure 2 line up heel

TTLM :install door and window	TVET Program: carpentry	
LILM :install door and window   Version 1	Author: FTA	Page 5



#### Marking out the framework

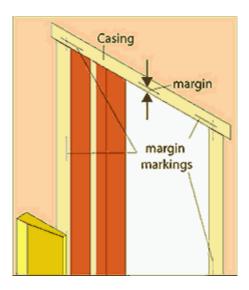


Figure 3 frame work

Architrave is normally fixed to the framework so that it sits back from from the edge with a margin of about 4 to 5mm - too near the edge can restrict the operation of the hinge and lock/catch striking plate, whereas too big a margin will reduce the amount that the architrave overlaps onto the framework thus reducing the available nailing area. It's a good idea to try to keep the size/style of architrave moulding and the margin around the framework the same throughout a property - although in some cases this may not be desirable or possible.

Mark the framework with the required margin gap by using short pencil marks across each corner and about 200mm apart around the framework, take care to ensure that all the marks are parallel to the edge of the framework and equally set back. These short marks will be enable the architrave to be accurately marked for cutting the mitres and fitting around the framework.

TTLM :install door and window	TVET Program: carpentry	
LLM :install door and window   Version 1	Author: FTA	Page 6

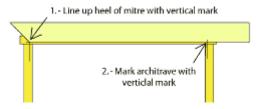


#### Marking and cutting the architrave

Take care that all the marking and cutting of the architrave is done accurately, this will help achieve neat corner joints.

Pay special attention when marking and cutting architrave to ensure that the angle is cut the correct way for the shape of the molding - the thinner side of architrave is normally the side which is nailed to the framework - for a mitered end, this will be the shorter side.

To cut an accurate 45 degrees miters, use a miter block, most will accommodate architrave up to about 12cm. If you are using larger architrave, or have to fit architrave around a number of openings, a miter saw may be worthwhile (either a manual or a power one - Power Miter Saws can usually be hired which makes life even easier). Miter Saws allow for the angle of the miter to be adjusted, so they are also worthwhile when fitting architrave around out-of-square framework.



#### Figure 4 architrave framing

The first length of architrave to mark and cut is the head piece - usually this has both ends cut with a 45 degree miter.

Start by cutting a 45 degree angle at one end of a length of architrave - remember that the thinnest edge of the architrave goes against the framework.

Once the first miter has been cut, offer up the length to the markings on the framework across the top of the door and position the 'heel' of the miter to the vertical marking on

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 7



the side framework (left side of above illustration). Hold the architrave firmly in place and transfer the vertical marking on the opposite side framework on to the other end of the architrave. Remove the architrave, using the mark on the uncut end as the 'heel' for the miter, mark and cut the second end. This gives the head piece cut to length and appropriately. For a loft hatch, all four pieces are, in effect, 'head pieces' with each end of each piece miter cut.

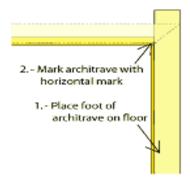


Figure 5 making architrave

Begin the first side piece of architrave by cutting square the bottom end, then stand it on the floor (with windows, rest the bottom on the inner window sill) and against the framework with the vertical side lined up to the margin markings on the side framework. Firmly hold the architrave in this position and mark at the top of the architrave with the position of the horizontal margin marking. Remove the architrave, and cut a 45 degree miter from this mark.

Follow the same procedure on the other side of the framework to cut the other side piece of architrave.

TTLM :install door and window -	TVET Program: carpentry	
FILM :install door and window     Version 1	Author: FTA	Page 8
1 0.0.0.		



#### Fixing the architrave

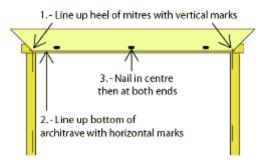


Figure 6 fixing

With all three pieces of architrave cut, place the head piece across the top of the framework; line it up with the horizontal margin markings, with the 'heel' of the mitred corners in line with the vertical margin markings, and fix it using a 50mm lost head nail (or panel pin) about half way across the framework timber and near the edge of the architrave, do not drive the nail full home. Add further nails about 30mm away from each end, ensure that the piece of architrave remains lined up with the horizontal margin markings. Nail in additional lost head nails along the top piece about 300mm apart. Leave all the nails protruding.

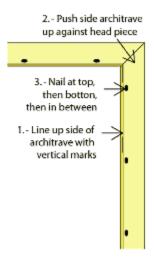


Figure 7 installing

Ī	TTLM :install door and window	TVET Program: carpentry	
	TTLM :install door and window Version 1	Author: FTA	Page 9



Place one of the side pieces of architrave in position against the side of the framework so that it lines up with the vertical margin markings, the top 45 degree miter should automatically fit tightly against the miter of the head piece. Nail the side piece to the side framework - start at the top, about 30mm down from the top miter using a 50mm lost head nail (or panel pin) near the edge of the architrave. Then nail at the bottom of the vertical piece of architrave to the framework about 30mm up from the floor, ensuring that the architrave remains in line with the vertical margin marks, nail in another nail about halfway up the framework. Nail in additional lost head nails up the side piece about 300mm apart. Again, leave all the nails protruding.

TTLM :install	door and window
Version 1	



Self-Check -1	Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is molding?

*Note:* Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

TTLM :install door and window	TVET Program: carpentry	
	Author: FTA	Page 11
1 0.0.0		



Information Sheet 18	marking , cutting and fitting Skirting to length
	and specifications

#### 18.1 marking, cutting and fitting Skirting to length and specifications

#### ✓ How to fit skirting boards on uneven walls

- 1. Measure twice, cut once. Before you buy your skirting boards, measure the room accurately and then add 20% to the total figure to allow for wastage. ...
- 2. Pack and gouge. Offer the boards up to the walls, then using a wood drill bit, drill through the boards to make a mark on the walls. ...
- 3. Finish with caulk

#### ✓ How to fit skirting boards

#### 1. Measure up

Use a tape measure to work out the length of skirting board you need and then add 20 per cent on to the total as a contingency.

#### 2. Mark the skirting

Mark clearly on each piece of skirting board which side you want facing into the room and which way up you want it to avoid any mistakes.

#### 4. Start with straight cuts

Start with any boards that can go in with square-edged cuts at either end, for example, either side of a chimney breast. Measure and then use a miter saw or miter box to give a good, straight cut.

Г	TLM :install door and window	TVET Program: carpentry	
١.	TLM :install door and window /ersion 1	Author: FTA	Page 12



#### 4. Attach first skirting board

Instant-grab adhesive is the most popular way of fixing boards, particularly in houses with plasterboard walls. Apply blobs and press the board onto the wall so the adhesive makes good contact, then wipe off any excess. If you want to screw the boards to a plasterboard wall, mark the position of the wooden studs and then put a pilot drill through the skirting board and the wall at these points.

If you are fixing to a solid wall, run a pilot drill through the skirting board to mark the wall every 6cm. Drill and raw plug these holes. Countersink the holes with a larger drill bit so the screw heads will disappear when fixed. Screws should be long enough to go through the board and at least 3cm into the wall or studs behind. Use wood filler to cover the holes before painting.

#### 5. Scribing the skirting boards

The next board you fit needs to be 'scribed' so it slots into the first board you have attached to the wall. To do this, first cut a 45-degree angle in the end of the new piece of board using a miter saw or miter box. Then, use a coping saw to cut away the waste section. You'll be left with the profile of the skirting board that will slot onto the section that is already attached to the wall. Practice with an off-cut first.

#### 6. Check and fit

Check the board you've just cut fits cleanly with the one you've already attached to the wall. If you're happy, cut or mitre the other end of the board and then attach to the wall. Plan the way your boards go in so that you're always fitting a square end to a scribed end, never scribe both ends.

TTLM :ii	nstall door and window	TVET Program: carpentry	
Version		Author: FTA	Page 13
10.0.0	•		



#### 7. External corners

Where the boards meet on an external corner, mitre both pieces at a 45-degree angle to create a neat join. Measure both boards to the corner and then mark this length on the back. Place the first board on the mitre, line the saw, set at 45 degrees, up with the mark you made, and cut.

#### 8. Cutting external angle

Make sure you cut the second board so that the 45-degree angle is in the opposite direction so that they meet. Create the opposite cut by moving a mitre saw to the other side of its axis.

#### 9. Adjustments

Always fit mitred external corners in pairs so you can adjust them to fit together accurately, rather than attaching one and then trying to cut another to fit.

#### 10. Fill gaps

Once complete, fill any gaps between the wall and the top of the skirting board with decorator's caulk and then run a damp finger along the join for a neat finish. Allow to dry before painting.

TTLM :install door ar	TVET Program: carpentry	
Version 1	Author: FTA	Page 14



✓ Fitting Skirting Boards perfectly to walls - follow this step by step guide on how I cut, fit, scribe and fix baseboards

This section contains everything you need to know about **fitting skirting boards** to a high professional standard, even if you are a DIY novice attempting to install skirting to walls for the first time.

Some of the different aspects that are covered on these pages;

- Common skirting board molding types available
- A complete list of the tools and fixings you need to cut, fit and fix skirting boards
- How to cut perfect internal corners
- · How to cut perfect external skirting mitre joints
- How I fix skirting boards to the walls (different methods depending on wall and type of boards)
- Some of the different ways I end skirting boards, like the pic above

#### ✓ What are skirting boards & when are they fitted?

Also known as **Base Boards** (in America) skirting boards are the tall decorative moldings mitered, scribed, butted to the walls, fixed around a rooms perimeter to cover and tidy the join where the wall meets the flooring or carpet.

Carpenters will be fitting skirting boards during the second fix stage, after the doors have been hung and architraves fitted.

They also protect the walls from getting battered by the vacuum cleaner.

The techniques for fitting skirting boards are the same for all profile and moldings types available.

If the floors will be carpeted, I fit the skirting boards before the carpets are laid (ideally the decorating has been done and the carpet fitters are the last trade in).

If wood or *laminate flooring is being laid*, I fit the skirting boards last.

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 15



#### ✓ Common types of Skirting Board profile available and materials

You can make a Skirting Board profile out of almost anything. You can if you're feeling creative even make your own with a Router and some cutters.

Fitting skirting boards that have grooves cut in the back is usually easier, as these grooves help prevent cupping (curving).

Sometimes skirting boards come double sided as well, with a different profile on each side.

Some of the common types of Skirting Board profiles available off the shelf include;

- Square (can even use PSE timber off the shelf)
- Bullnose
- Chamfered
- Pencil Round
- Ovolo
- Torus
- and Ogee

Skirting boards are available in several different materials too, like

- Softwood (Pine, Douglas Fir for eg)
- Hardwood (Oak, Mahogany, Bamboo for eg)
- and MDF (usually supplied already primed)

The easiest skirting boards to fit and fix are pine. The hardest are probably MDF. MDF is great in that it doesn't bow, twist or split and can come primed already. But the dust is nasty and it can flake/peel in some instances.

When buying skirting boards check for the straightest lengths with least amount of knots and other imperfections.

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window \ Version 1	Author: FTA	Page 16



#### ✓ What tools are needed when fitting skirting boards?



Figure 8 fitting skirting materials

This is a complete list of all the tools I use when fitting skirting boards to get perfect corner joints, miters, scribes, to fix the boards firmly to each other and to the walls:

- **Sharp pencil -** HB are good for 2nd fix carpentry work
- Miter/Chop saw I've got a huge Dewalt chop saw which is really accurate and can shave off small amounts, cutting Skirting boards is possible with a hand powered miter saw instead
- Tape Measure I use a 8m Staney pocket tap measure
- **Compass** I use a Faithfull 200mm Square Leg Divider/ Compass to scribe internal corners
- Coping Saw I use a Eclipse coping saw
- Wood Glue I use Grip fill or no more nails to stick skirting boards to walls, PVA
  to glue the miters together. There's more info about the most common types of
  wood glue and their best uses here
- **2nd fix Nail gun** I use a Dewalt 2nd fix nail-gun to pin miters together and fix MDF skirting boards to the walls (with 'no more nails' glue behind)
- Nails, punches, screws and a battery drill I've written a whole page about how to fix skirting boards

I've got an extendable stand above but if you don't have one or anything similar you can improvise with things you can generally find on site.

TTLM :install door and window	TVET Program: carpentry	
LLM :install door and window   Version 1	Author: FTA	Page 17



#### ✓ Should you cut Miters or Scribe Skirting board corners?

When joining skirting boards at an outside corner they will always be mitred. The most common type is a 90° degree corner so two 45° degree cuts are needed.

At an inside skirting corner one board is cut in tight/square to the wall and the second is then cut and 'scribed' to the exact profile / shape of the first board. This is called an *internal scribe*.

There should only ever be an internal miter if the angle is very shallow, less than 22.5°, like in a bay window for example, when scribing is very difficult or near impossible to do.

When planning where to start in a room try to avoid having a scribe on one end and a miter on the other if possible.

When fitting skirting boards, if a single skirting board length isn't enough to cover a wall in one piece, you will need to cut a **Lengthening Joint**.

I *never* Butt join two boards together end to end square, I always join them together with a mitre, between 30-45°.

This helps to hold the two pieces flush, gives the joint a large surface area to glue together and they can also be fixed (pinned) to one another. If you cut them square, they are very difficult to line up and keep flush.

If you are fitting skirting boards to stud work timber walls, make sure you position the lengthening join where there is a timber stud behind that you can fix the end of the overhanging board to. It will look a bit like the below right picture, the marker pen on the floor is there so I know the position of the timber studs.

Taller skirting/base boards can be prone to 'cupping' and like the more decorative moldings may need a little extra attention, I'll show you how to get a perfect fit on those too.

- ✓ Step by step guide for cutting, fitting and fixing skirting boards to the walls
  - Step 1: Get set up, determine how you will fix the Boards to the wall

If unknown, bang a nail into the wall somewhere it will later be covered by the skirting to find out what the wall is made of (make sure you don't do this above/below an electric socket or anywhere else there may be a cable!)

•		1
TTI M diseased also as a selection decree	TVET Program: carpentry	
TTLM :install door and window	Author: FTA	Page 18
Version 1	766101.7 77	l ago io



If you are fitting skirting boards to timber stud work walls then before you start anything else locate and mark clearly all of the studs (when building stud work you can save yourself time at this stage by marking the position of the studs onto the floor).

There should be one timber stud in every corner and then at equal distances of either 400mm or 450mm (rarely up to 600mm) apart.

Bang a nail or Brad Awl into the wall, again below the height of the Skirting so the hole won't be seen later. Once you've found two or three, you can measure the distance apart they are to help find the rest.

Use a stud/pipe/electrical cable detector whenever possible to locate pipes and cables first.

Mark all of the Studs onto the floor so you know where to nail/screw later (you can put a faint pencil line on the wall if necessary).

#### Step 2: Cutting the first skirting board - find the best place to start off

The picture above explains how I decide which skirting boards to cut first. The arrows indicate an *internal scribe joint*.

The back wall is the longest and the first seen when walking through the door, so I cut that skirting board first, tight up against the two walls either side.

Second, I move round the right hand side as the lengths of skirting there are longer than those on the left.

Whenever possible, my scribe cuts are positioned so they are less likely to be seen and always avoid having a scribe on both ends of a board.

The picture below shows when fitting skirting boards in between two walls, the top edge is long and the bottom edge slightly shorter, which helps fit the top of the boards really tight;

This isn't always necessary but cutting it out of square every time saves you going back to the saw on occasions when the plasterers have been lazy!

This first boards needs to be fixed properly now, so nail or screw it tight to the wall depending on what is recommended on this page.

,	, 5	
TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 19



### • Step 3: How to cut perfect 45° & 90° degree miters for external skirting board corners

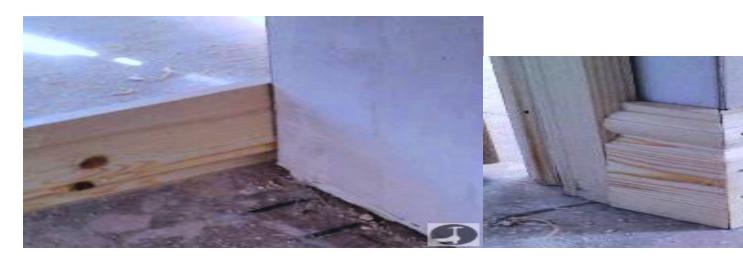


Figure 9 fixed boards

After fitting skirting board in between two walls like above, the next one will need to be scribed into it.

90° Outside corners get mitred at 45°. The mitre is cut last, so I fit the opposite end first (that could be butting into a wall or scribed into another piece). Only once that's perfect can the miter be marked.

To do that, I hold it in place like in the picture top left and mark a line up the back of it where the wall stops.

Next, place the board onto the chop saw bed face down so you can see the pencil line. Tilt the mitre saw over to 45° degrees (check with a square) and slowly cut the Skirting miter, keeping the saw blade to the 'waste side' and leaving the pencil line in.

Repeat the process for the opposing miter, put them in place and push the two together to make sure they fit, trim a bit more off if they are too long.

#### Step 4: Fixing Skirting Boards

I always glue and pin the mitre joint together with veneer or panel pins and *plenty of wood glue* before fixing the two pieces to the wall.

TTLM :install door and window	TVET Program: carpentry	
	Author: FTA	Page 20
10.0.0		



Once that's fixed together neatly I screw/nail the Boards to the wall. Punch the nails under the surface and sand off any remaining pencil lines.

Self-Check -2	Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. Write common types of Skirting Board profiles

a)

TTLM :insta	all door and window	TVET Program: carpentry	
Version 1	all door and window	Author: FTA	Page 21
			1



*Note:* Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

### Operation sheet 2

#### (Information Sheet 18)

Page 22



#### ✓ Steps and techniques for installation of skirting

- 1. Select appropriate tools and equipment.
- 2. Select and use the appropriate OH&S personal safety equipment.
- 3. Determine from specifications, area to install skirting.
- 4. Determine specified skirting type.
- 5. Determine starting point or position of first skirting board.
- 6. Mark out stud positions.
- 7. Cut and install first skirting board to specifications.
- 8. Set out and cut scribe on adjoining skirting.
- 9. Cut adjoining skirting to length and install to specified tolerance, scribe to be tight fitting.
- 10. Cut and install remaining skirting including remaining scribe and mitre joints. All joints must be tight fitting.
- 11. Punch nails below skirting surface to specified tolerance.
- 12. Butt joints to architrave to be tight fitting no tolerance.
- 13. Store reusable materials safely.
- 14. Maintain and store tools and equipment.
- 15. Clean work area and dispose of waste materials safely.

Information Sheet 19	Fitting Miter joints flush to face.

#### 19.1 miter joints

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 23



✓ A miter joint (miter in American English, sometimes shortened to miter) is a joint made by beveling each of two parts to be joined, usually at a 45° angle, to form a corner, usually a 90° angle. For woodworking, a disadvantage of a miter joint is its weakness, but it can be strengthened with a spline.

A miter joint is used for joint two boards at an angle (or compound angle). You can see the joint most commonly in small wooden boxes or wooden frames. The latter of these is a very strong joint, given the strength of modern wood glues.

A miter joint (miter in British English) is made by cutting two parts to be joined at a precise angle. EG: cutting two pieces at a 45° angle would form a 90° angle when the two pieces are joined. ... A hand saw is fitted into the slots at the desired angle and used as normal to cut the material to the indicated angle.

#### √ How to sew mitered corners

- 1. When hemming two edges that meet, the multiple folds along each edge pile up on top of each other and create an excess of fabric at the corner. ...
- 2. Press the same amount again. ...
- 3. Unfold everything.

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window   Version 1	Author: FTA	Page 24
1		



- 4. Find the middle square formed by the folds. ...
- 5. Trim along line.
- 6. Fold angled edge in so that the creases line up with each other.

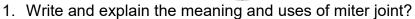
The formula involves dividing 360 by the number of sides to calculate the corner angle. Then divide it by two to get the miter angle. If you're making a five-sided project with all sides equal, you divide 360 by five to get 72 degrees. So each joint or corner forms a 72-degree angle.

Self-Check -3	Written Test
1	

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 25
1 0101011 1		





*Note:* Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

**Information Sheet 20** 

marking, cutting and fitted Scribed joints

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window   Version 1	Author: FTA	Page 26
1 0 0 0 0 0 0		



#### 20.1 Scribed joints

A Scribed Joint is used mainly where two moldings meet at an internal corner. Rather than being mitered, the end of one piece is shaped to fit the profile of the other

When fitting Skirting Boards for example, it is best practice (when using natural timber) to use a Scribed Joint for all internal angles and a Miter Joint for external angles. This is because timber will tend to shrink across its width and this would cause a Miter Joint to open up on an internal corner.

Scribing is also known as Coping and it is for this purpose that a Coping Saw was developed.

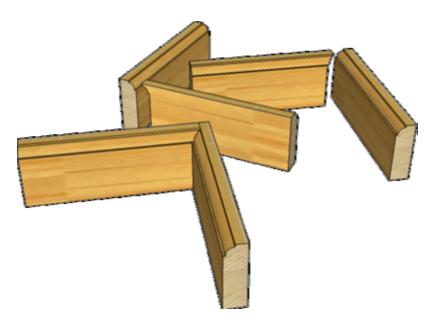


Figure 10 scribed joints

## How to scribe skirting board for perfect inside corner joints

In order to get a tight joint you have to **scribe skirting board** at internal corners instead of mitering them.

TTLM :install door and win	TVET Program: carpentry	
TTLM :install door and win	Author: FTA	Page 27
10.0.0		



This means fitting one board by butting it straight into the corner, then cutting the next one in to match the exact profile, so it fits perfectly up against the first.

Whilst this sounds difficult for very intricate mouldings it is actually really straight forward.

This page has everything you need to know first for internal 90° corners, and after that to scribe skirting board into corners other than 90 degrees like 122.5°, often found in bay windows.

#### Step by step guide for cutting internal skirting board corners

This page picks up where the main skirting board page started, so the first board should already be installed tight into the corner.

#### • Step 1: Cut a back miter

Take a measurement for the next piece and add about 100mm (4 inches).

Transfer this measurement to a new piece of skirting board and cut to length. Place this onto the chop saw standing up exactly as it will be on the wall and turn the saw to 45°, as though you were mitering the internal corner all the way.

Cut down through the top part of the moulding only, and stop when the saw blade reaches the flat surface, like in the picture of a Chamfered skirting board below.

#### • Step 2: Use a compass to scribe one skirting board shape onto the other

Offer this up to the board that is already nailed in place. Put the pencil in your compass and use it to scribe the shape of the first board onto the second as shown in the picture (start the pencil line from the saw cut downwards).

You can now see the exact amount (everything to the right of the pencil line) that needs to be cut out!

#### Step 3: Cut the waste out out with a coping saw

If when you scribe skirting board it's perfectly straight then it can be cut with a miter saw. If not, I use my *jigsaw with a downward cutting blade*.

TTLM :ins	tall door and window	TVET Program: carpentry	
Version 1	tall door and window	Author: FTA	Page 28



Keeping the saw blade to the right hand side of the pencil line I carefully cut the skirting up to the part first scribed with the compass.

Let the blade stop and remove the jigsaw. Finish the rest off with a coping saw that has a fine blade.

When coping intricate baseboard trim, it's sometimes difficult to remove the waste so to make this easier cut at an angle, taking more timber out of the back of the board where it won't be seen. By doing this you ensure it doesn't get in the way of the face edges touching if the wall is very slightly out of square. Finally sand off any pencil lines and,



Figure 11 cutting with jigsaw

#### √ How to scribe skirting board angles other than 45/90 (122.5°, 135° etc)

When the corner is not 90°, the method is the same but there's a little more worth knowing in order to scribe skirting boards in tight.

Again, as above cut one board tight into the corner, using a bevel to determine the angle and fix it firmly in place. I fix it at this stage otherwise you could scribe into a board that's going to move when you fix it.

TTLM :install door and win	TVET Program: carpentry	
TTLM :install door and win	Author: FTA	Page 29
10.0.0		



#### • Step 1: Bisect the angle

To scribe the next one into it, the first thing to do is bisect the angle of the walls that the skirting will be fitted to. I do this every time, in case it isn't exactly 122.5°.



Figure 12bisect the angle

Once found, set the miter saw to the bisected angle.

#### • Step 2: Cut the profile or moulding to the marked lines

Next, grab another piece long enough and cut the angle but as with when cutting a normal 45 degree corner, only cut through the mouldings profile, down to where the board becomes flat.

I use a combination square to mark a line on the face of the board from the end of that cut on the profile down to the bottom of the board.

TTLM :install door and window Version 1	TVET Program: carpentry	
	Author: FTA	Page 30
V 01 01011 1		



This will help to guide the next cut correctly (you can use a compass to scribe skirting board like the normal corner above if the first one is cupped).

Turn the skirting board upside down and set the saw to the original angle, that the first board was cut to but in the opposite direction.



Figure 13 cutting the profile

#### Step 3: Back-cut the flat face of the skirting board:

This is the cut I used the jigsaw for to scribe skirting board into a normal corner.

This time I cut down through the flat face of the board taking the back of the board out at an angle. The angle to back-cut this part of the skirting will be the same angle the walls are at to each other, as this part of the skirting will fit up against the board already fixed to the wall.

Cutting the back out of the skirting like this ensures it doesn't get in the way of the first board already fixed. If you want to be sure you can adjust the angle to remove a little more out of the back, you can use a handsaw if your miter saw won't do the angle/depth of cut.

You can hopefully visualise that if you cut this square as with a normal internal skirting scribe, this skirting board would not slide up flush to the one already there.

#### • Step 4: Remove the waste from the profile section with a coping saw:

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 31



Finally, use a coping saw to continue cutting all the way through the profile of the moulding too.

The angle at the top needs to be maintained but the angle for the rest will maintain the same cutting angle as the previous step otherwise it will prevent you getting a tight fit.

If in doubt remove a little more - it won't be seen once the board is fixed (don't remove too much and leave the skirting board too thin or it may split when you fix it though).

Self-Check - 4	Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

TTI M :install door and	vindow TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 32



2. ----- is used mainly where two moldings meet at an internal corner A. Butt joint B. Dovetail joint C. Miter joint D. Scribed joint 3. Write the steps of scribing skirting board angles A. В. C. D. Scotia return end is cut to profile shape and **Information Sheet 21** length

#### 21.1 Scotia

point

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 33



#### ✓ How to Cut Scotia With a Miter

Cutting with a power miter saw makes mitering moldings and other pieces simple, and laminate floor scotia, or base shoe, is no exception. The key to successful miters is accurate measurements followed by correct placement on the saw. In most cases, the end cuts of scotia will be 45-degree miters. Two 45-degree ends equal 90 degrees, which is the angle of every square corner. Since scotia has thin edges, sharp blades are essential for clean cuts that minimize splintering.

#### Step 1

Measure the wall section you intend to install scotia along at its base, where it meets the floor. Mark the scotia to length as long as the wall section, plus the width of the base of your scotia for each corner that folds back away from the wall you are installing on, This is known as an outside corner.

#### Step 2

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 34



Mark your ends to indicate whether they will be mitered for an outside or inside corner. Inside corners are cut into the length of the scotia, so that the back edge is longest.

Outside corners are cut away, so that the front edge is longest.

Step 3

Set your saw to 45 degrees by aligning the indicator arrow to the correct setting on your miter saw's miter gauge. Set the gauge left of center for a left-end outside corner or right-end inside corner. Set the saw right of center for a right-end outside corner or left-end inside corner.

Step 4

Position your scotia on the saw's table with its top edge against the back fence as it will be against the wall and its bottom face against the table as it is will be against the floor. Set your mark to the left of the blade for a right end and to the right of the blade for the left end.

Step 5

Hold the molding firmly against the table and fence, with the left hand for a right end and the right hand for the left end, with your hand well back from the blade. Grasp the trigger handle with the opposite hand without crossing over your other arm. Start the saw and pull the blade down, making the cut in one fluid motion.

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 35
1 0.0.0		



Figure 14 door trim

Door trim should be mitered at a 45-degree angle at the top; when measuring door trim, always take this into consideration.

- 1. Measure from the floor to the top of the door jamb on the inside. ...
- 2. Make a mark on the trim piece at 80 1/4 inches. ...
- 3. Set a miter saw at 45 degrees. ...
- 4. Measure across the top of the door jamb

Self-Check - 5	Written Test

**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 36
1 0.0.0		



## 1. What is scotia?

*Note:* Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

Information Sheet 22	marking and fixing Standard pelmet molding
information Sheet 22	sections to length

# 22.1 pelmet molding

TTLM :install door and window	TVET Program: carpentry	
LLM :install door and window   Version 1	Author: FTA	Page 37



On a window that measures 60 inches from the top to the bottom, a 10- to 16inch-long cornice box is in good proportion. However, if you want to make the
window look taller, the box's length must stay in proportion.

For clarification, a cornice is the cabinet trim that fixes on the top of kitchen wall cabinets, whilst the pelmet is the smaller trim that goes around the bottom of the cabinet. ... Each cornice and pelmet is constructed from a combination of solid oak and MDF, covered in a real oak foil.

• Cornice is the trim that sits at the top of the wall unit. Pelmet or light pelmet as some people call it, is the trim that fits underneath your wall units. Plinth is the skirting, the panel that fits around the bottom of your base units.

Traditional Light Pelmet is a molded kitchen cabinet pelmet (or light bar as it is known also) that is used for the underside of your kitchen wall units.



Figure 15 pelmet molding

## √ The difference between cornice and pelmet

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 38





Figure 16 cornice and pelmet

Self-Check -6	Written Test	

TTLM :install door and window	TVET Program: carpentry	
LILM :install door and window     Version 1	Author: FTA	Page 39



**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

- 1. ----- is the trim that sits at the top of the wall unit
  - A. Cornice
  - B. Wall
  - C. Roof
  - D. None
- 2. What is the difference between pelmet and cornice?

*Note:* Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

# **Operation sheet 3**

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 40



### (Information sheet 22)

- ✓ Steps and techniques of installing of timber cornice:
- 1. Select appropriate tools and equipment.
- 2. Select and use the appropriate OH&S personal safety equipment.
- 3. Determine specified area for cornice installation.
- 4. Determine starting point or position of first cornice to be installed.
- 5. Mark out ceiling joist or batten positions.
- 6. Cut and install first cornice to specifications.
- 7. Measure, cut & install adjoining cornice. Scribe joint to be tight fitting with no gaps.
- 8. Measure, cut and install remaining cornice, joint to be tight fitting with all nails punched below surface without splitting the cornice.
- 9. Calculate quantities and cost of material required.
- 10. Store reusable materials safely.
- 11. Maintain and store tools and equipment.
- 12. Clean work area and dispose of waste materials safely.

LAP Test 3 Practical Demonstration
------------------------------------

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 41



Name:	Date:
Time started:	Time finished:

**Instructions:** Given necessary templates, workshop, tools and materials you are required to perform the following tasks within 3 hours.

- Task 1: Select appropriate tools and equipment.
- Task 2: Select and use the appropriate OH&S personal safety equipment
- Task 3: Determine specified area for cornice installation
- Task 4: Determine starting point or position of first cornice to be installed.
  - Mark out ceiling joist or batten positions.
  - Cut and install first cornice to specifications.
  - Measure, cut & install adjoining cornice. Scribe joint to be tight fitting with no gaps.
  - Measure, cut and install remaining cornice, joint to be tight fitting with all nails punched below surface without splitting the cornice.
  - Calculate quantities and cost of material required.
  - Store reusable materials safely.
  - Maintain and store tools and equipment

Task 5: Clean work area and dispose of waste materials safely.

Information Sheet 23	setting out Raked molding to position and
	shaping molds

TTLM	1 :install door and window	TVET Program: carpentry	
Version		Author: FTA	Page 42



#### 23.1 Rake Molding

Molding and trim is a simple way to add definition and character to any room.
 This pine rake molding has many applications, but is most commonly used as a decorative crown or border for windows. ... Molding and trim is a simple way to add definition and character to any room.

Raking Mold. A sloping mound made to a profile that will neatly match up against a horizontal mold. Scotia. A wooden molding with a concave face that is fixed to cover the internal walls to ceiling joints.

Panel molding is a decorative molding originally used to trim raised panel wall construction. Panel molding adds depth and style to any wall and comes in many patterns and styles.



Figure 17 rake molding

Self-Check -7	Written Test

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 43



**Directions:** Answer all the questions listed below. Use the Answer sheet provided in the next page:

1. What is rake molding?

*Note:* Satisfactory above – 4 out of 8 points Unsatisfactory - below 4 out of 8 point

LAP Test 2 Practical Demonstration
------------------------------------

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 44



Name:	 Date:	
Time started:	 Time finished:	

**Instructions:** Given necessary templates, workshop, tools and materials you are required to perform the following tasks within 3 hours.

- Task 1: Clean and Select appropriate tools and equipment.
- Task 2: Using the given template Select and use the appropriate OH&S personal safety equipment..
- Task 3: Using the given template, Determine from specifications, area to install skirting Determine specified skirting type.
  - Determine starting point or position of first skirting board.
  - Mark out stud positions.
  - Cut and install first skirting board to specifications.
  - Set out and cut scribe on adjoining skirting.
  - Cut adjoining skirting to length and install to specified tolerance, scribe to be tight fitting.
  - Cut and install remaining skirting including remaining scribe and mitre joints. All
    joints must be tight fitting.
  - Punch nails below skirting surface to specified tolerance.
  - Butt joints to architrave to be tight fitting no tolerance.
  - Store reusable materials safely
    - Task 4: Maintain and store tools and equipment.
    - Task 5: Clean work area and dispose of waste materials safely.

TTLM :install door and window	TVET Program: carpentry	
TTLM :install door and window     Version 1	Author: FTA	Page 45
version i		_



Name:	Date:
Time started:	Time finished:

**Instructions:** Given necessary templates, workshop, tools and materials you are required to perform the following tasks within 3 hours.

- Task 1: Select appropriate tools and equipment.
- Task 2: Select and use the appropriate OH&S personal safety equipment
- Task 3: Determine specified area for cornice installation
- Task 4: Determine starting point or position of first cornice to be installed.
  - Mark out ceiling joist or batten positions.
  - Cut and install first cornice to specifications.
  - Measure, cut & install adjoining cornice. Scribe joint to be tight fitting with no gaps.
  - Measure, cut and install remaining cornice, joint to be tight fitting with all nails punched below surface without splitting the cornice.
  - Calculate quantities and cost of material required.
  - Store reusable materials safely.
  - Maintain and store tools and equipment

Task 5: Clean work area and dispose of waste materials safely.

TTI M :install door and winds	TVET Program: carpentry	
TTLM :install door and window Version 1	W Author: FTA	Page 46



#### **List of Reference Materials**

•

- https://www.ccaa.com.au/imis\_prod/documents/Library Documents/C
- <a href="https://www.houselogic.com/remodel/painting-lighting/concrete-painting/">https://www.houselogic.com/remodel/painting-lighting/concrete-painting/</a>
- <a href="https://www.google.com/search?sxsrf=ACYBGNQHUi0Oo5VLVWER8HU5E4Hiyr5yWw:1569940933971&q=what+is+Applying+co">https://www.google.com/search?sxsrf=ACYBGNQHUi0Oo5VLVWER8HU5E4Hiyr5yWw:1569940933971&q=what+is+Applying+co</a>

TTLA	A singtall door and window	TVET Program: carpentry	
TTLM :install door and window Version 1	Author: FTA	Page 47	



# The trainers prepare TTLM

No	Name	Region	Qualification	TVET	Phone number
			level	College	
Zeyede	В	Dire	DDPTC	0921153259	zedjesus22@gmail.com
Tekle		dawa			
) (I) (I) (I)	_		110771	2010155000	" 20100 "
Yibeltal	В	Amhara	MOTTA	0912455288	yibecon2019@gmail.com
Shitie			PTC		
Mihiretu	В	Oromia	NEKEMTIE	0910195546	mihambi@gmail.com
Hambisa			PTC		
Tariku	Α	SNNP	DILAPTC	0916512167	mamush572@gmail.com
W/Agegne					
Fikrie	Α	Somale	JIGjigaPTC	0913294412	shiferawufikre@yahoo.com
Shiferaw					

TTI	M :install door and window	TVET Program: carpentry	
	.M :install door and window sion 1	Author: FTA	Page 48
1	0.011		



#### **Facilitator**

No	Name	Region	TVET	Email & phone number	Phone no
			Bureau		
1	Tilahun	Amhara	Amhara	Tilahun tesfaye	0940651823
	Tesfaye		TVED	eewnetu@gmail.com	
			Bureau		
2	Abere	Amhara	Amhara	Aberedagnaw10@gmail.com	09 18 1 41
	Dagnaw		TVED		11
			Bureau		
3	Abdulahi	Somale	Somalia		0935635068
	Muktare		TVET		
			Bureau		

TTLM :install door and window Version 1	TVET Program: carpentry	Page 49
	Author: FTA	