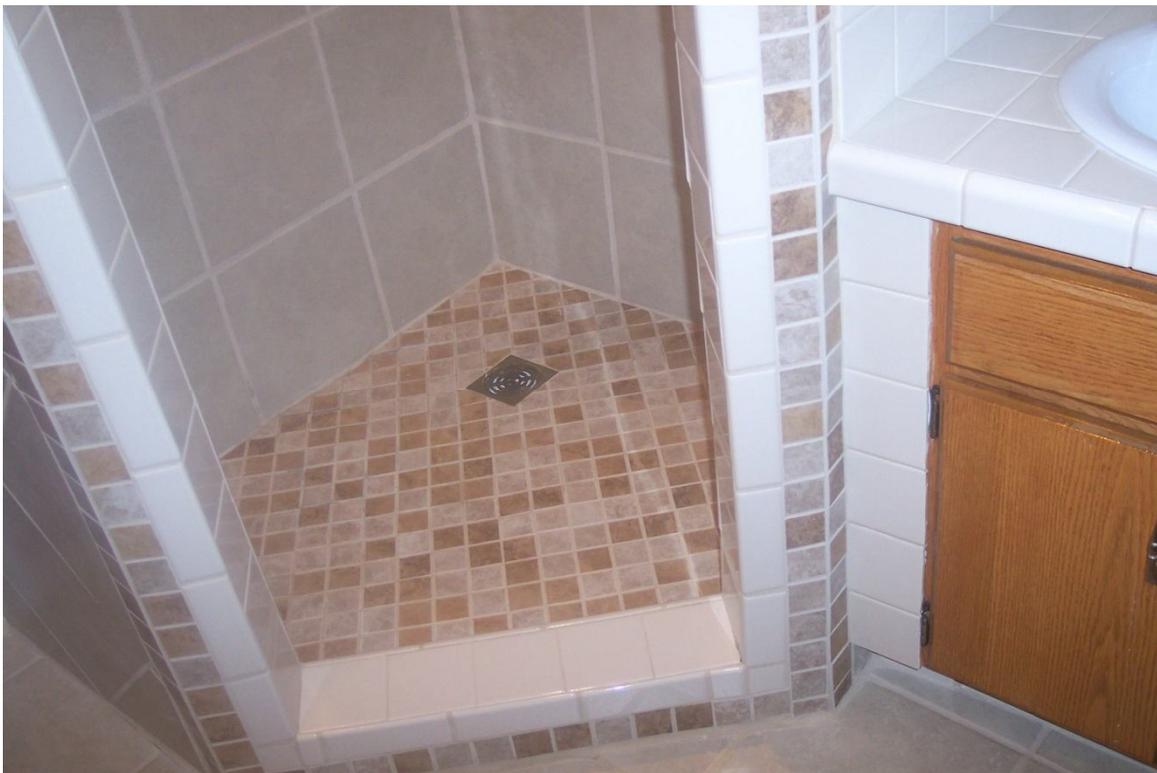


# Bathroom tile ideas



# THE COMPLETE TILE BATHROOM



Tile bathrooms are really popular right now. They add value to any home and they create a look and feel of quality and durability. It doesn't matter if you're building a new home or doing some remodeling, this eBook will guide you through each step of the process carefully.

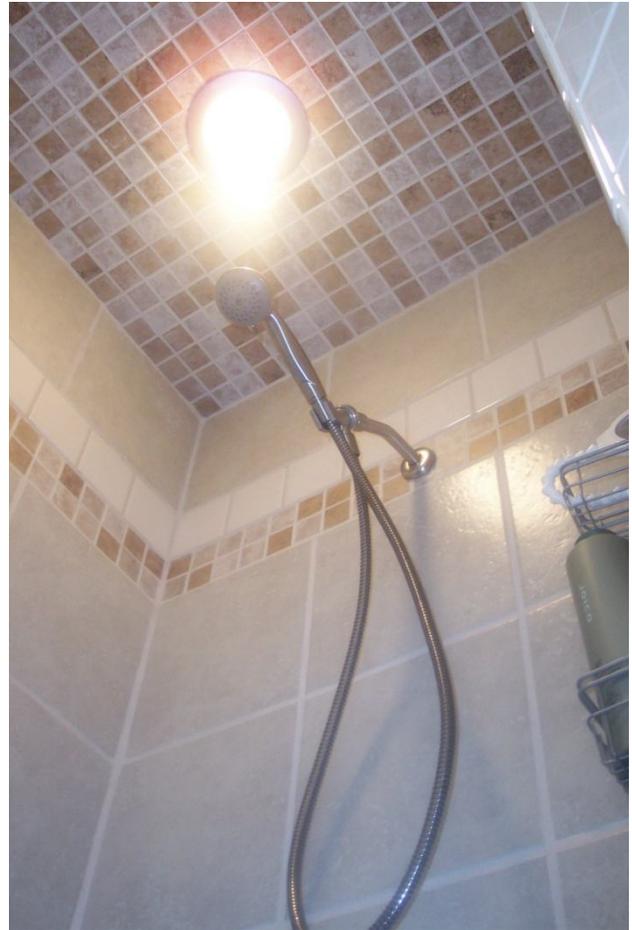
I completely remodeled my master bathroom for the sake of writing this eBook because of feedback from my website visitors. Many do-it-yourself homeowners want to install tile in new homes or remodeling projects, but they don't know anything at all about tile work.



Here are a few pics of my new bathroom and I have to confess that I love it! It's not perfect (none of my projects are ever perfect), but I saved about \$11,000 by doing my own labor. That's what I'm all about. My total cost of this bathroom was \$2700.



Most average bathrooms will cost from \$10,000-\$20,000 to have contractors do all the work. If you do it yourself, you'll save a bunch and have fun in the process.



People think that working with tile is really hard, but just like all other aspects of house building, you just need to learn a few tricks of the trade.



Once you know some tips and tricks, your tile projects will be fun and rewarding.



It's was important to me to include all aspects of tiling a bathroom. Shower installation, countertops, baths, toilets, walls, floors, the sink, and finish tiling are all included.





I will even go over all the plumbing and Electrical systems so you will get a complete idea of what a complete bathroom makeover entails.

# So let's get started

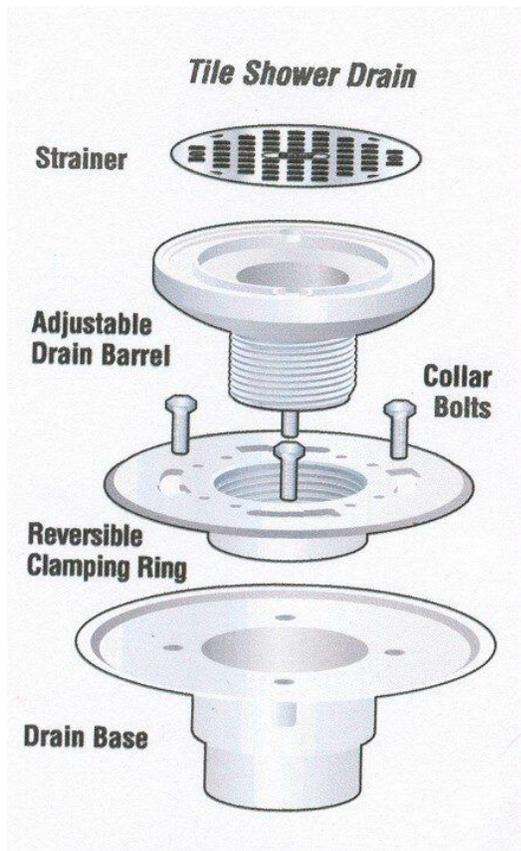
## Concrete shower pan



One of the biggest areas of self-doubt for homeowners is building a shower pan that won't leak. It's not so difficult though. This is a multi step process that may seem redundant, but every step is important.



Once we know where the shower will be, we will put in the drain plumbing. Remodeling projects will already have the plumbing installed and drain P-trap in place. I have included photos of the drain pipe from above the floor level and under the floor so you can better understand how the drain assembly fits.



The shower drain assembly is the first place to start. It usually comes in 3 or 4 pieces. The drain base is what we need to start with.

This base will fit over the drain pipe. We'll need to use ABS cement to make a leak-free connection with the drain pipe and the base.



The base will look like it's too far above the floor level once you glue it in place, but the first layer of mortar will be fairly thick and should be almost level with the top of the drain base.

By the way, it's a good idea to plug the drain pipe with a rag so that you don't accidentally drop mortar in it.



Now we can frame in the shower pan and walls. The beauty of making our own concrete shower pan is that we can make it any size or shape we want. I just went with a simple neo-angle corner design.

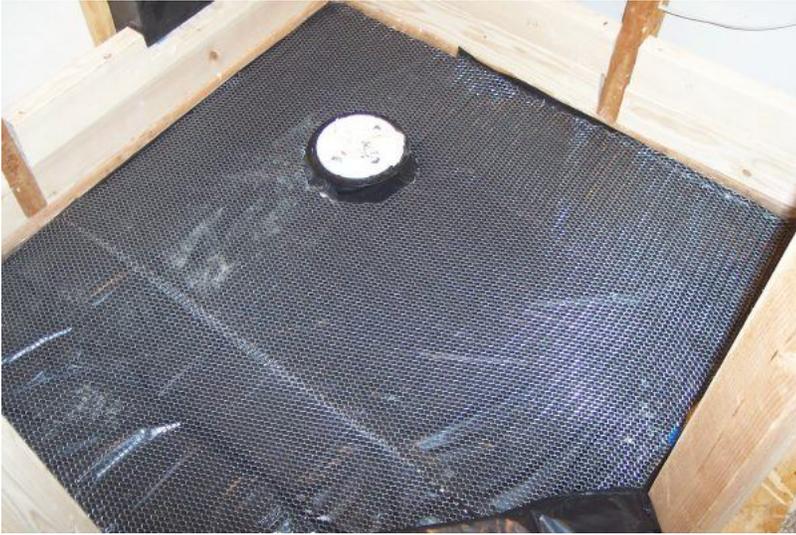
It's kind of hard to see the framing design in this photo. The most important thing when framing in a shower is to get the walls square, straight and even.



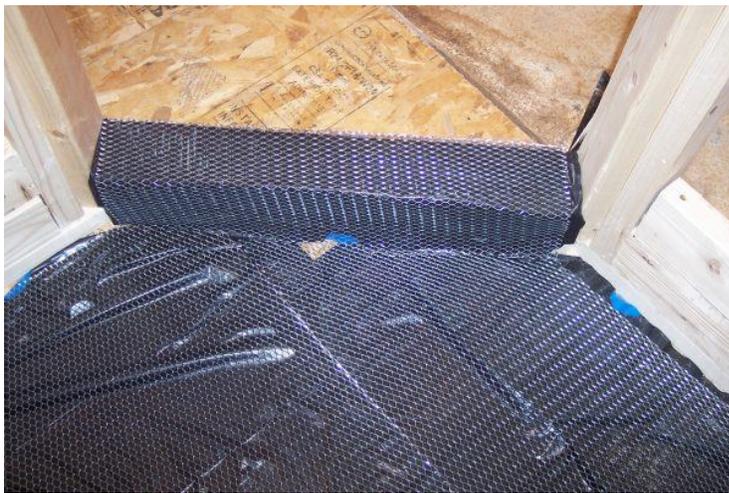
Notice how I've added an extra 2x4 around the top of the shower pan in the photo above right. You will want to have at least a 7-inch high wall for the rubber membrane to drape over. You will also want to make sure that the shower entrance barrier step is at least 5-inches high.



Before we mix up the mortar we need to lay down tar paper or plastic on the floor. This prevents the wood floor from sucking out the moisture of the mortar before it dries.



It's also important to nail down wire mesh to give the mortar extra strength. You can get this mesh at Lowes or Home Depot by the concrete section.



You can also put the wire mesh over the step on all three sides so the mortar has something to adhere to.



The mortar mix is usually Portland cement or thinset mortar which can be found at any building store.





I like to buy the dry mortar mix so I can add a latex additive which doubles the strength of the mortar. I mix about half a gallon to 4 bags of cement.



Now we spread the mortar starting from the shower walls and working our way inward to the drain. We need to get a fair amount of slope so that water flows into the drain without making puddles. This is the first layer of mortar. It will be level with the top of the black drain base which is in the photo with the white clamp ring inserted. The mortar bed will be about 2- inches thick.

Let this layer of mortar dry for at least 24 hours. By the way, the photo above shows a light colored mortar. This is simply because I wasn't paying attention and bought gray mortar instead of brown.



Next, we need to get CPE membrane. This is a special kind of rubber that will make a waterproof seal. This is sold at most plumbing stores. You will need to remove the clamping ring from the drain base, but leave four screws sticking up.



One really big rule about the CPE membrane is that it can't have any cuts or holes in it anywhere except when we cut out the drain hole. Adjust the membrane so it fits well into the shower pan. Fold it in corners and run it up over the sides of the pan. You can secure it with nails up high or even on the outside of the pan walls, but it needs to be watertight inside the shower pan. The curb is the same. It can be nailed outside of the shower pan.



Now feel where the screws are through the membrane. You will want to cut a small hole in the membrane over the drain and also over the screw holes.

You can cut it with a utility knife.





Next, put the clamping ring back on and tighten down the screws to make a good seal.

There are four tiny holes in the clamping ring called “weep holes”. These help remove moisture that gets caught on the membrane surface over time. It’s best not to use adhesive when

you’re installing the clamping ring. This can prevent moisture from escaping. The pressure from tightening down the screws is good enough.



At this point you will need to use a special kind of cement board instead of sheetrock for the inside walls. The cement board will overlap the CPE membrane so the water flows down off the walls and into the drain.



Notice how the cement board is nailed to the wall but it doesn't rest on the membrane. You'll want to leave about 1/4-inch between the cement board and the membrane.

This prevents possible tears in the membrane from the weight of the cement board. It's also important to avoid putting screws or nails lower than about 5-inches toward the bottom of the shower pan.



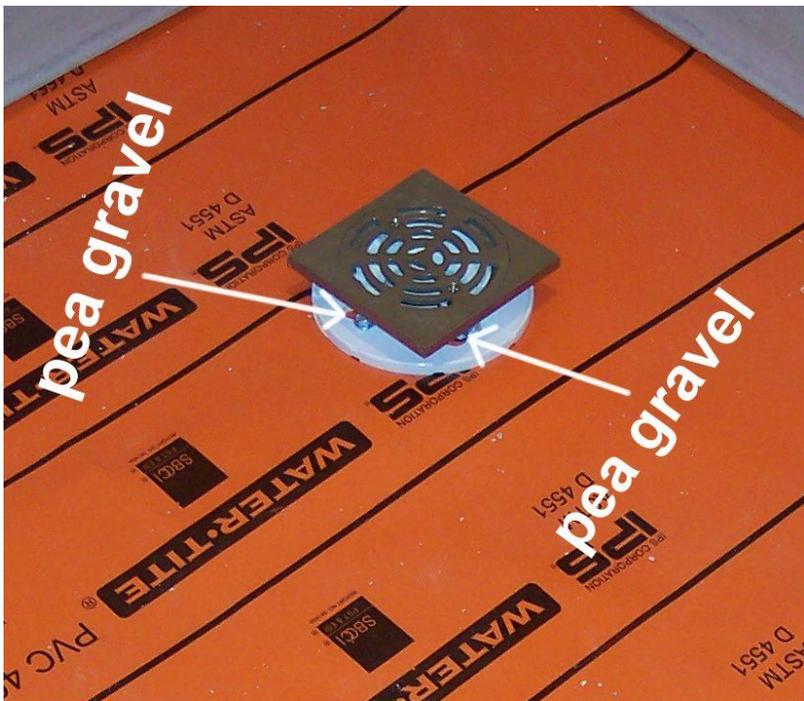
You can also put mesh around the curb if you want to make the curb with mortar. I find it easier to do it this way.

Just bend the mesh and slide it over the membrane. You can nail it on the outside of the step or curb.



The membrane is really tough stuff, but it can still be punctured if you're not careful.

Try not to walk on it while installing the cement board onto the walls.



You can put the adjustable drain cover back on. I bought a square drain cover so it would be easier to cut the tile and fit each piece into place.

At this point it's a good idea to put small pieces of gravel or small stones over the top of the weep holes.

This prevents the mortar from plugging the weep holes.



Back to making mortar again. This is the same as before with the same amount of latex additive.

Make sure the mortar gets mixed thoroughly. It's especially important to have the strongest mortar possible when shaping the shower pan curb because it's a fairly thin layer.



The second layer of mortar slopes downward from the walls to the drain.

The mortar level around the drain needs to be precise. It's OK if the mortar is slightly high, but if the mortar level is too low, the drain will protrude above the level of the floor tile.



The slope is really important here also. The drain assembly can be raised or lowered by turning it. Make sure the drain isn't too high. Water doesn't drain well when the drain is higher than the tile. You will need to know how thick the tile is that you will be using. I try to get the mortar level right around 3/8-inch from the top of the drain. That leaves room for thin set mortar adhesive and the tile.



The curb needs to be done along with the shower pan so it can dry as one piece.

Try to make the layer of mortar at least 1-inch all the way around the curb and shape it with a trowel so the tile fits good.



Let the second layer of mortar dry at least 24 hours before you start putting in tile.

## Installing a recessed shower light

Before we continue with the cement board, we need to put in a recessed shower light. These are available at any building store. These have a waterproof cover made especially for shower stalls.



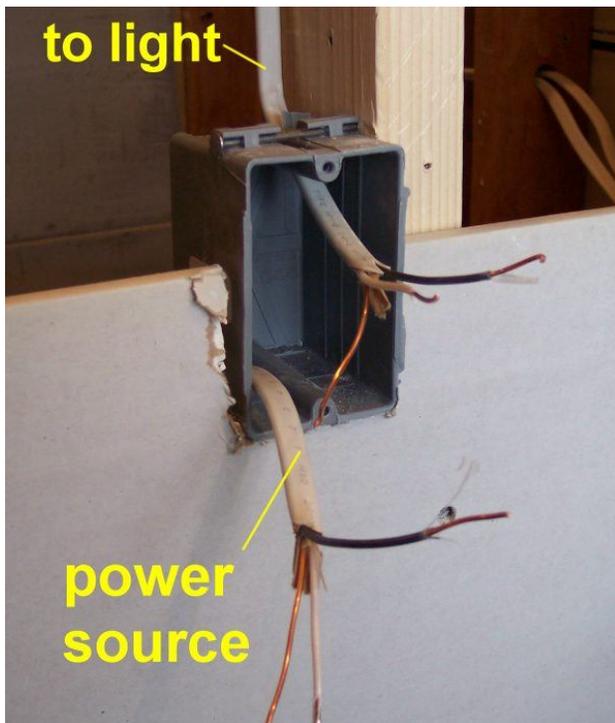
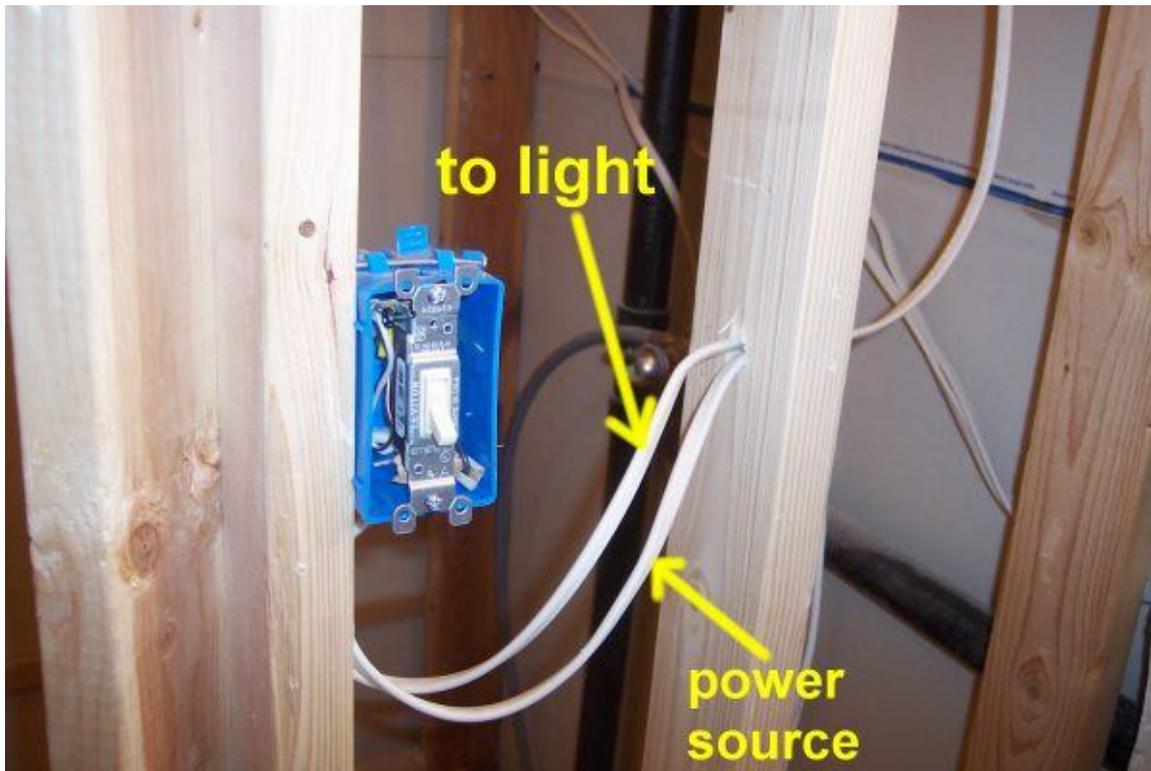
We need to frame a ceiling in our shower where the recessed lighting canister can be placed. Some shorter canisters are only 6-inches deep.



This makes it easier to frame because a lot of space isn't needed between the canister and the actual ceiling.

The shower ceiling will need to be framed in and the light canister can be attached between the framing members. Many canisters are adjustable with slides. This helps to be able to center it better.

Next you'll need to run electrical cable from the light to the switch. This needs to be inside the walls that you'll enclose with cement board. You'll also need to run a cable from the switch to the house power source. Please be sure to turn the power off before you connect to the house power.



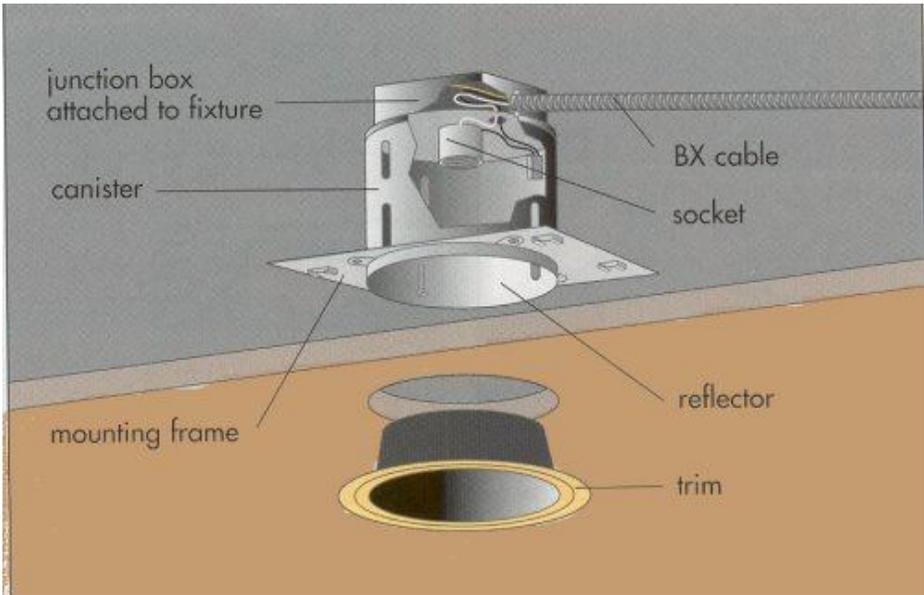
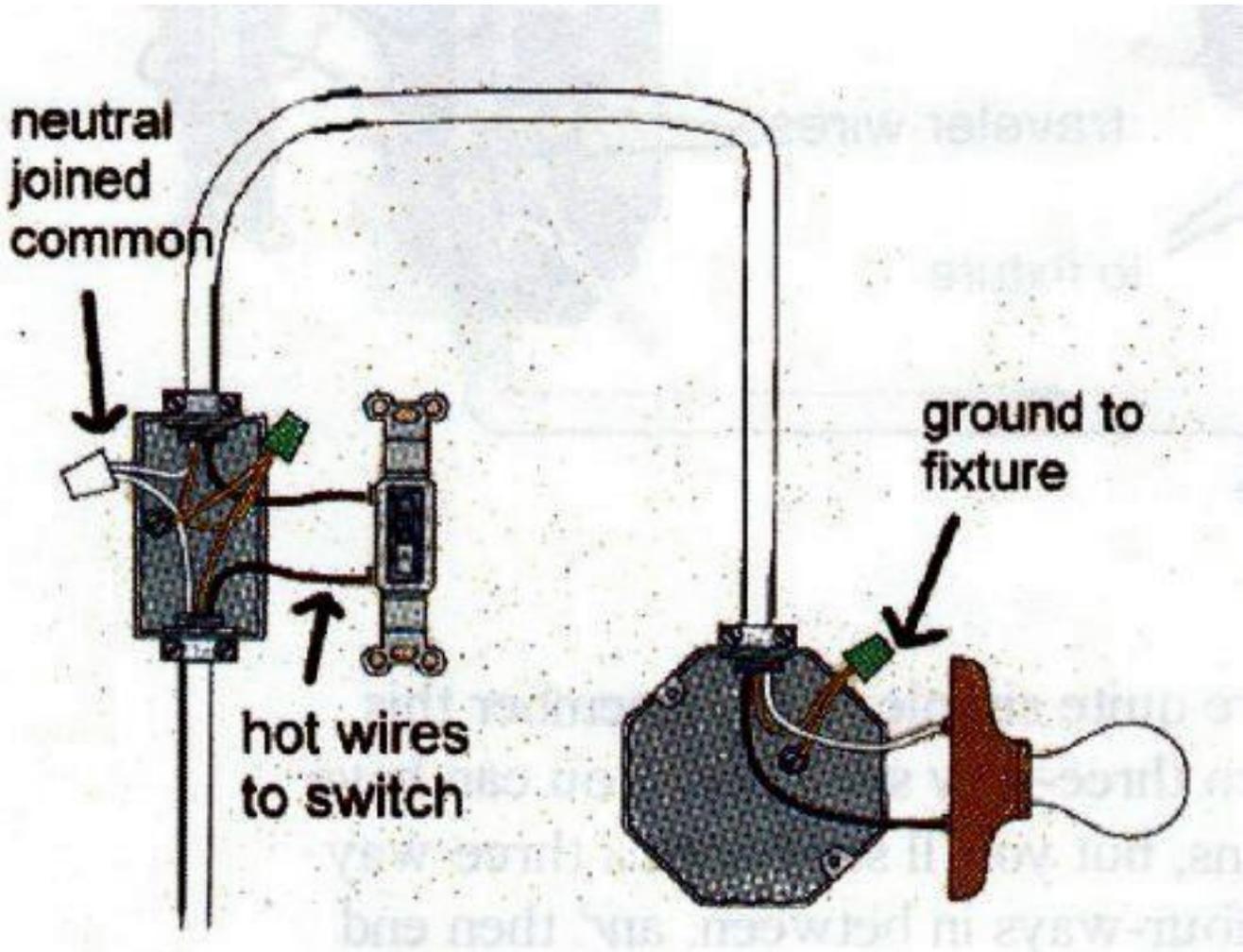
On a simple light switch like a shower light, you take cable from the house power and cable from the light and join them in one electrical box. There will be six wires in total.

The white wires will be joined together with a wire nut. So will the copper ground wires.

The black wires will be attached to the light switch. The light switch will have two brass screws to connect the hot lines (black wires) to.

The black wire from the power source will attach to the bottom brass screw and the black wire that goes to the light will attach to the upper brass screw.

Please see my way cool, super high quality diagram below.



The canister light connects just like the diagram above. The only difference is that most canister lights have a small metal box that's connected to the canister where all the wires are contained. You can just run the electrical cable directly into this box and connect black to black, white to white, and ground to ground.

## Installing cement board



Cement board is used instead of regular sheetrock in high moisture areas. It's kind of heavy and difficult to cut, but it's very durable. It's also part of most modern building codes for showers. There is also green board which is easier to work with. Green board can be used in other parts of the bathroom but cement board should be used inside the shower.



You can cut cement board with a blade made for cutting cement composite boards. Just put it on your skilsaw and it works really well.

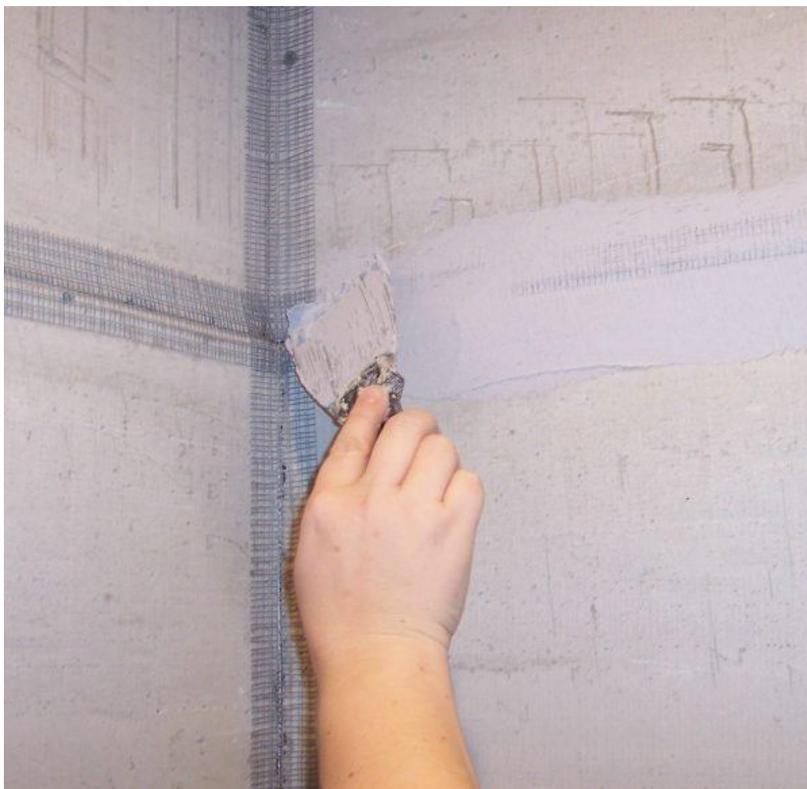
Remember to protect your eyes. Cutting this stuff can be pretty nasty.

You'll need to cut out the shower handle hole, the shower arm hole and the light fixture hole. Fortunately, all these things have cover plates that cover up uneven cuts and holes.

You will want to keep the holes fairly small though because some cover plates like the shower arm covers are quite small.



There are special screws for the cement board that you buy where you get the board. Be careful not to screw into any plumbing or electrical lines. The cement board should be screwed into wall framing studs.



Once the cement board is in place you will need to tape the joints with special adhesive netting and then put one layer of cement board compound over the tape.

This helps make a better moisture seal and sound seal.



Be sure to seal everything with the netting and compound. Seal the shower base to the cement board around the bottom of the walls.

Let this dry for at least 24 hours before you begin the tile work.

It looks pretty ugly at this point, but that will soon change. Time to go tile shopping.

## Selecting tile

It's fun to find the perfect tile that matches your bathroom project. If you're on a budget though, you'll need to follow a few bits of advice to get the best deal or your project could turn out to be really expensive.

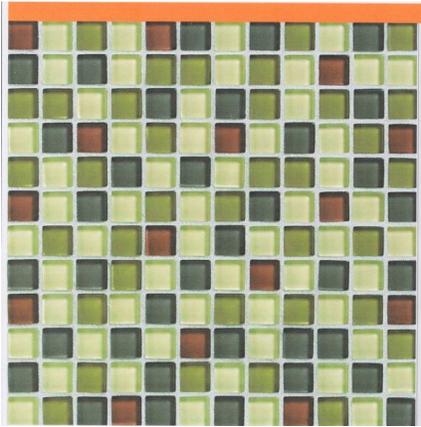


Many people fail to see the hidden costs or at least the not-so-obvious expenses when selecting tile. You see, there are the actual tiles that serve as coverage and there are bullnose or trim pieces that cover corners and act as final trim. Small trim pieces in many cases will exceed the cost of bigger tile pieces, but many do-it-yourselfers don't consider this until their project is ready for final trim.



The best thing to do is to find a reasonably priced type of tile and at the same time find inexpensive types of trim pieces that match. Don't make the mistake of pricing out tile per square foot and assuming it will represent the larger portion of the materials cost of your bathroom.

Those trim pieces add up surprisingly fast so try to find some that match, but won't break the bank.



Shower floor and ceiling tile



Floor tile



Floor and wall tile



Bull nose trim



The fun thing about tile is that you can mix and match floor and wall tile in most cases. Inside our bathroom we used several different kinds of tile. We even used the same floor grid tile and cut it apart to set in some accent strips along the walls. You can get really creative and save a bunch of money at the same time.



There are certain sizes of tile that fit perfectly in certain situations. For example, shower walls are made with 2x4s. After the walls are covered with cement board or sheetrock, they end up with a thickness of right around 5-inches. You can get tile that fits inside the shower doorway and has decorative bullnose on each side as a standard building size.

When selecting floor tile it's important to find tile that isn't slippery. A lot of tile manufacturers put a slippery glaze on tiles that can be a hazard in bathrooms. I would steer away from excessively smooth floor tiles in the bathroom.

## Cutting tile



Cutting tile sounds like a tough job, but with the right tools it's really easy. It's definitely messy no matter what though. For the bigger jobs you'll need a diamond blade tile saw. That sounds expensive but it isn't. You can get a small table saw for around \$60. It's totally worth it. These little saws have a water reservoir to keep the blade cool.



You can etch or scribe the surface of the tile with tile scribes and it will often break where it's been etched. There are tile nippers that work really well for chipping away small pieces of tile.



Tile cutters work really well also for straight cuts. The handle has a sharp scribing wheel that slides along the surface of the tile. Once the surface is etched, the handle forces the tile to break in half with just a little pressure.

All of these tools can be rented at any rental store because they are so popular. They aren't expensive to purchase outright though, but you may never need them again after you finish your project. I guess that's why they're a popular tool at rental stores.

## Installing tile

We will need to get some really strong adhesive for installing tile. I like premixed thin set mortar mix for all applications in bathroom tile. You can get it anywhere.



Let's start out with the shower floor. You can choose whatever design you like for the floor. It's definitely easier to lay the tile along the walls in a square pattern starting in the corner and working outward.



My wife likes to use angles. She's really creative and her ideas always look great. They usually take extra work though. She decided to run the grout lines in the same direction as the entryway.



These are 12x12-inch grid tiles. Each tile is held together with a dab of flexible glue. These flooring tiles are great to work with.

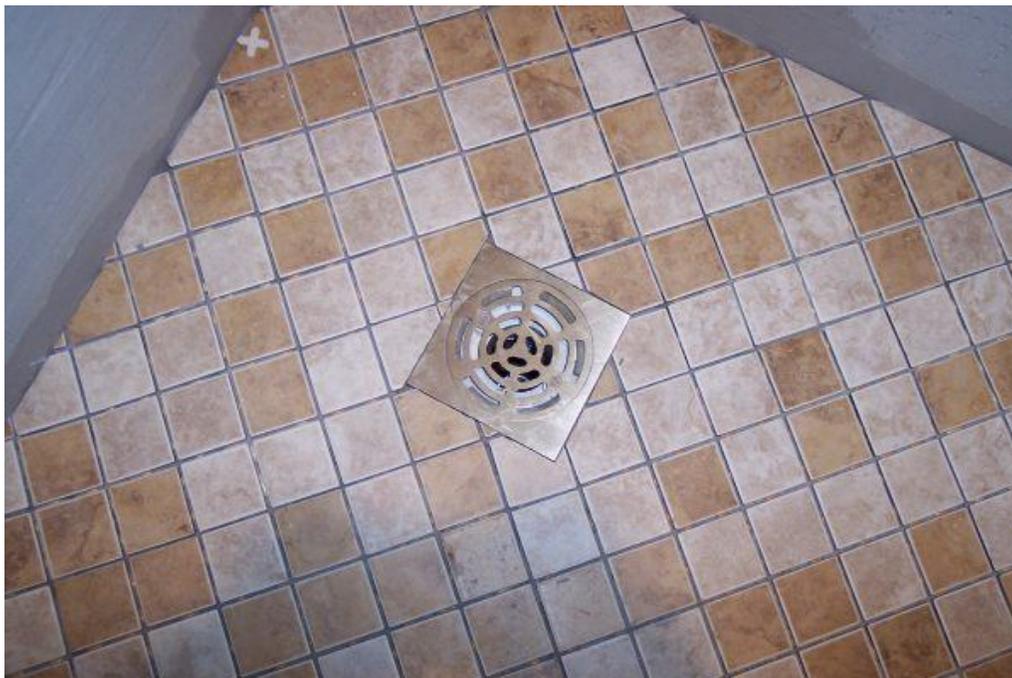
You can cut them apart for accent decoration also on walls. This will save a lot of money in place of buying actual accent tiles.



There's a reason for the wavy pattern when we apply the thinset mortar with the slotted trowel.

It creates an airspace and a suction when you press on the tile. The airspace helps the mortar dry while holding the tile secure.

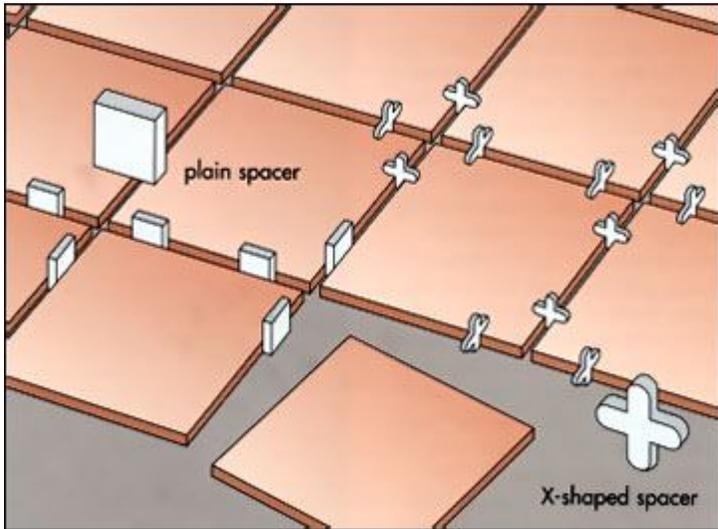
Just in case you wanted to know.



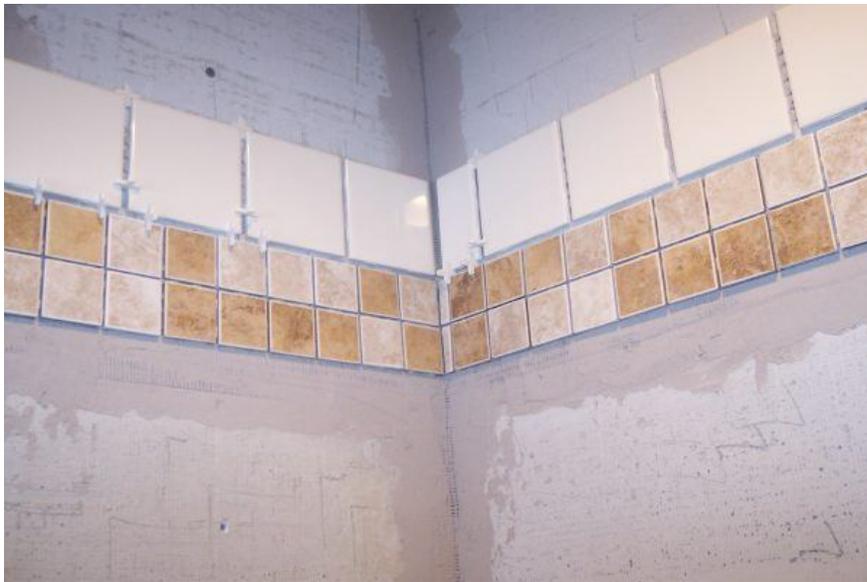
The measurements and cuts don't need to be perfect because the grout will fill in the joints.

It's still a good idea to take your time to get it close.

You'll be looking at it for years to come.



You can use spacers to get a uniform fit between tiles. These are really handy for holding wall tiles in place to keep them from sliding down.



We decided to start the shower walls with the decorative tile first.

We cut strips from the floor tiles so the walls matched the floor and put in some glazed white squares.

This adds variety so it doesn't look like a prison shower. (Not that I've ever seen one)



Then we put in large tiles for the rest of the shower walls. This is where the spacers come in handy. Those tiles are heavy.

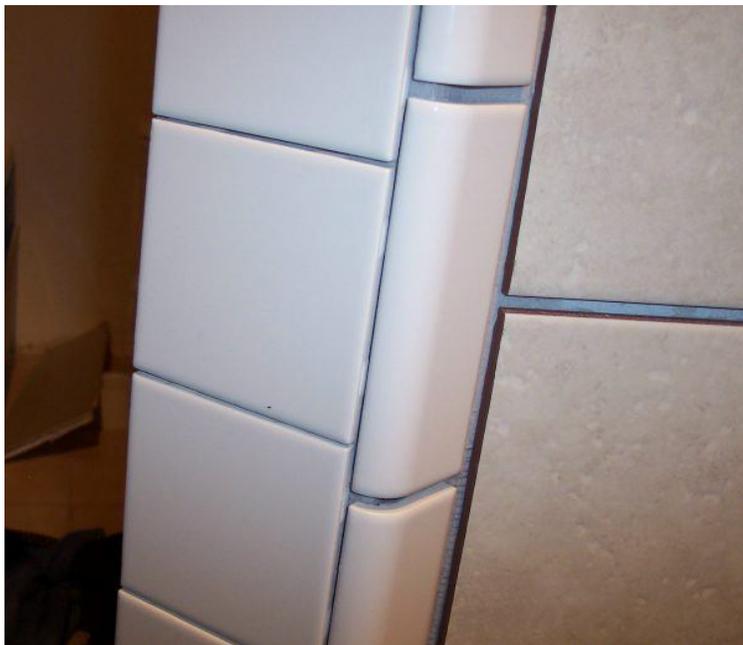


We used the same tile for the ceiling that we used on the floor.

This gives the entire shower a nice sense of balance.



For the shower doorway we put in 4-inch square tiles along with corner bull nose for a rounded look.



All these pieces use the same thinset mortar with the wavy design from the trowel. They usually stay in place once you push on them.

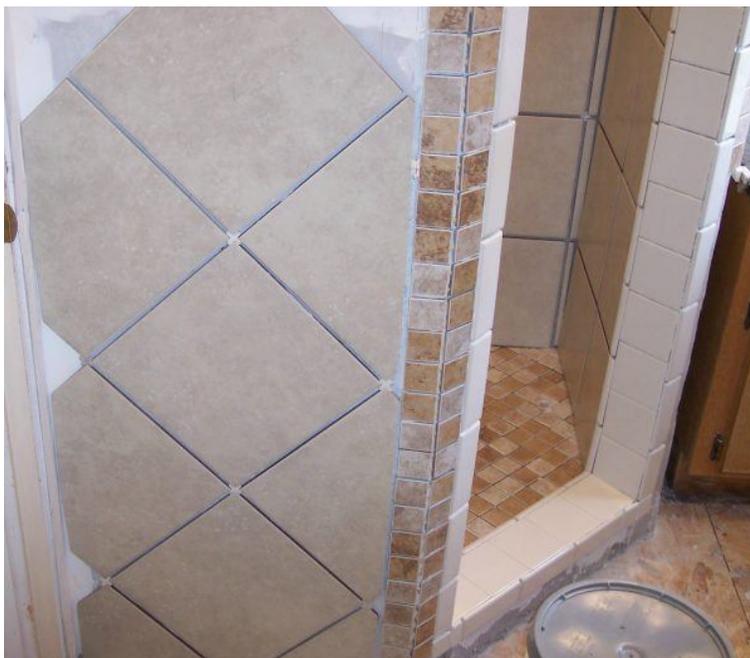
It's important to get a good connection between the tile and the wall with the mortar by pressing fairly hard when putting them in place.



We used the same 4x4 tiles and bull nose all the way around the shower doorway.



Now that the shower has the entire tile installed we can move on to the other walls in the bathroom. It's a good idea to use greenboard for the other walls in the bathroom because of high humidity. Greenboard has a water resistant covering.

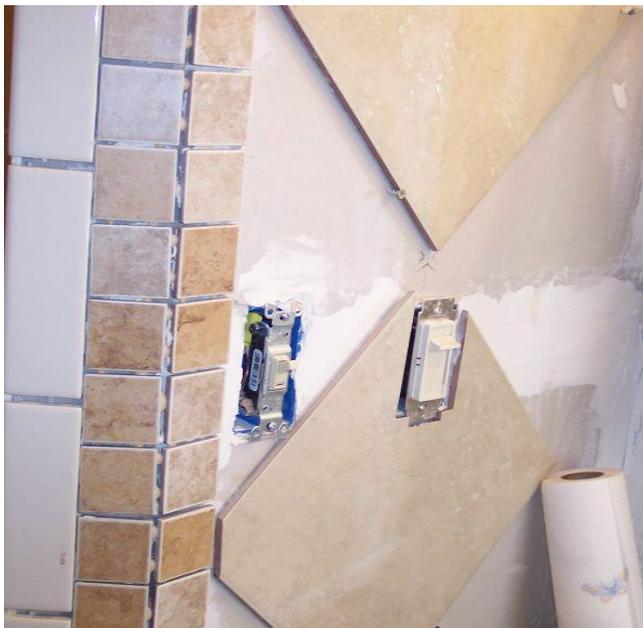


My wife really likes angles. She also cut strips of the floor grid tile for accent decoration around the outside of the shower door.

I like the diamond look of the tiles even though we have to make more angle cuts at the walls.



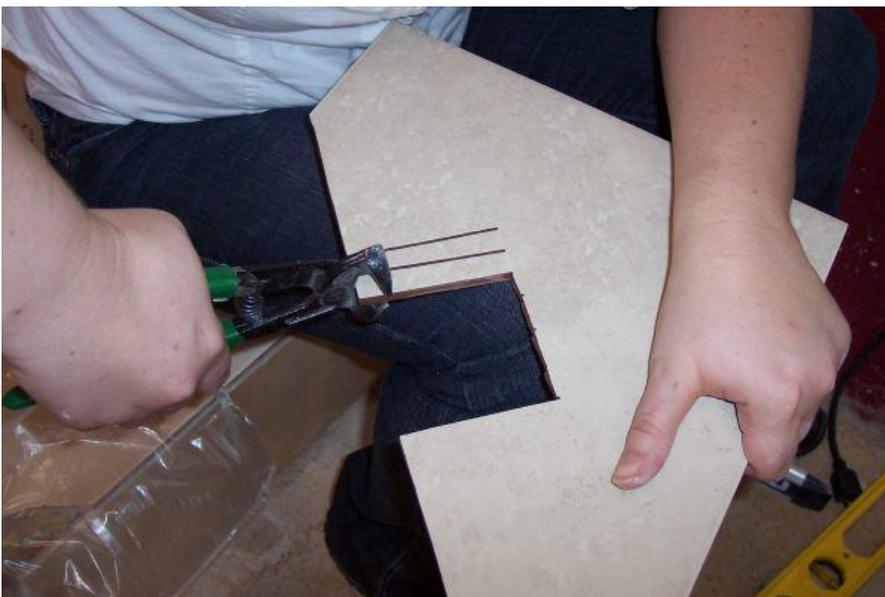
The angles go clear to the ceiling and we decided to make the grout lines wrap around the wall angles.



Outlets and wall switches require a little extra measuring and planning, but it's not too tough.

Try to get the measurements fairly close to the size of the switch. The rest will be covered up by the switch cover plate.

This wall has the light switch to the shower and a dimmer switch for the accent light that illuminates the jetted bath.



Switches and outlets can be cut out with the tile saw by cutting straight lines and then removing the pieces with a nibbler.



My wife is meticulous in measuring and marking the tiles. I'm better at cutting tile.

She's creative, I'm destructive. We complete each other, kind of.



We decided to use the same diamond pattern for the side of the jetted bath.

We used bull nose corner trim to make the corners look smooth.



For the bathroom walls we used a combination of large tiles with a strip of decorative tiles, along with some white glossy trim up to the paint line.

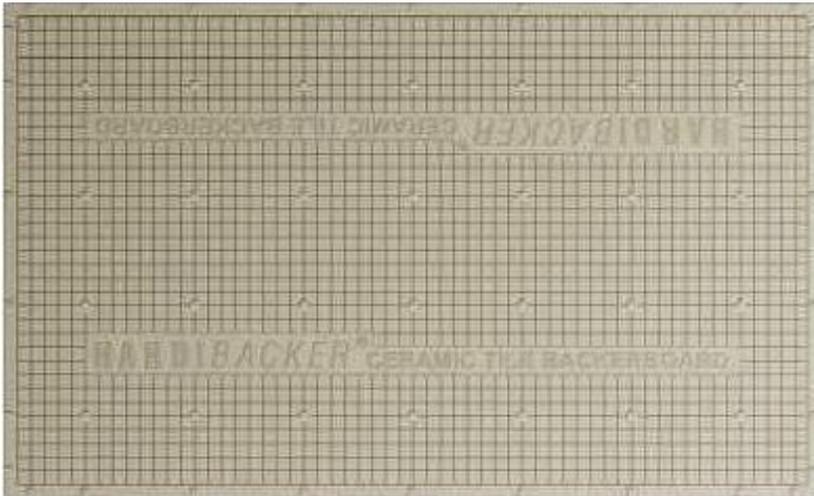


## Tiling countertops

We want to renovate this bathroom vanity countertop so that it matches the rest of the bathroom. If this was a new install, we would have a bare counter with the plywood exposed.

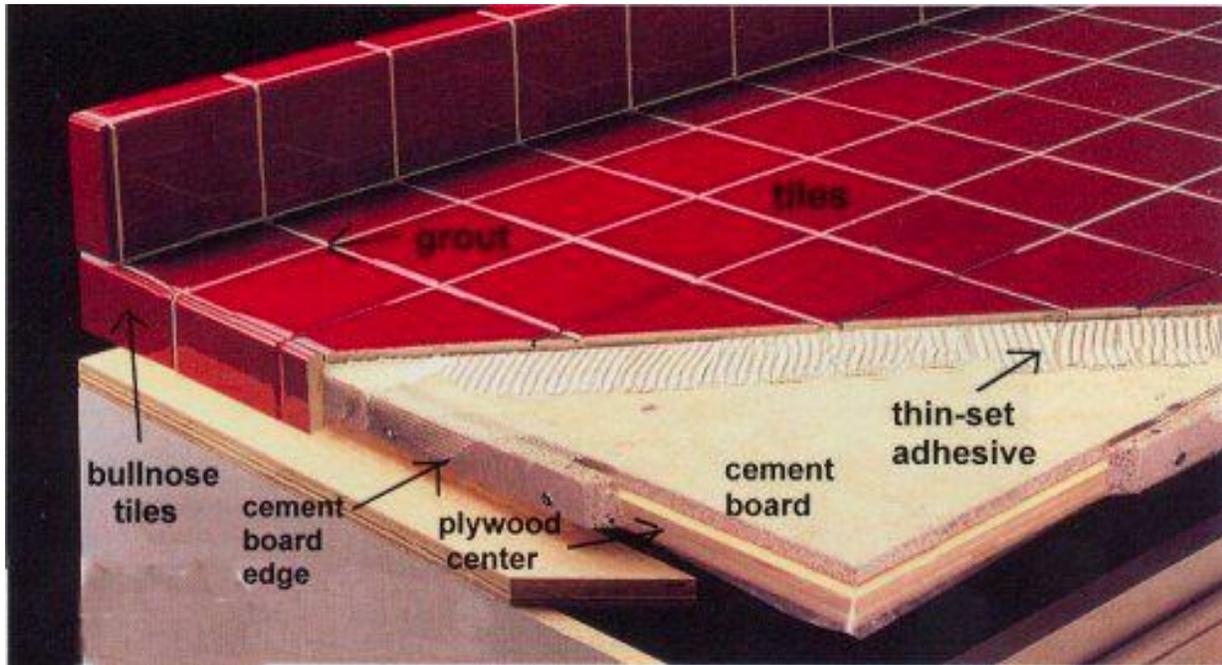


In that case we would treat it like the shower pan where we put tar paper or plastic over the plywood with the mesh screen to hold the mortar in place. We would apply a 1-inch thick layer of mortar, smooth it out and then let it dry.



We could also do it the same way we do floor tiles. We could lay down cement board or lightweight backer board with thinset mortar adhesive.

We don't need to let it dry for very long this way before we apply the tile.



I recommend using either cement board or backer board for countertops though. We will need to put down the backer board and also apply strips of backer board to the counter edges. This will make a strong counter.



We didn't put up any backer board where the backsplash is. We just stuck the tiles to the sheetrock with thin set mortar.

You can get away with that so the backsplash doesn't protrude too far from the wall.



We needed to remove the old bathroom sink and the Formica. Then we put in light backer board and used thinset mortar to put the tiles and bull nose tiles in place.

## Tile flooring

Bathroom tile flooring is luxurious if done properly. All bathroom tile floors need to have a strong subfloor made of cement board.



Without cement board the floor will move around and the tile will eventually come loose.

The floor preparation for the cement board is simple. You will need to clean the floor and vacuum it to get all the dust removed.

If any particle board or subfloor material is loose then it should be tightened down.



We will need to put a layer of mortar down on the floor so we can apply the cement board. This is the same mortar mix that we use throughout the bathroom project.

Portland cement with a little latex additive works just fine for this. Trowel the mortar to get the wavy lines so we get a good seal to the subfloor.



Cut the cement board to fit from wall to wall. Press each piece firmly in place and put pressure on it for a few seconds.



Once all the boards are in place you can fasten them in place with a few screws. The mortar will hold the cement board in place.

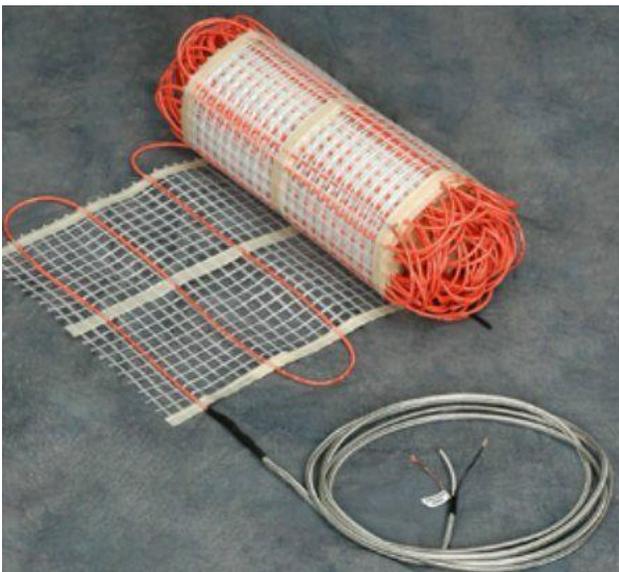


You will need to apply the sticky netting mesh and then run a single layer of cement board compound on the joints.

This will make a really strong moisture seal and also a sound barrier so the floors will be quiet and strong.

Let the cement and mortar dry for at least 12 hours before you apply the tile.

One more thing before we start putting the floor tiles in place is if we want a heated floor then now is the time to put the radiant heat strips down.



Radiant floor heating mats are an easy way to get even floor heat. You just roll the mats out and connect them together in the shape of your floor.

These just plug in to a 120-volt line in the house wiring.



This will take a little planning before you close the bathroom walls up so the cable can run into an electrical line.



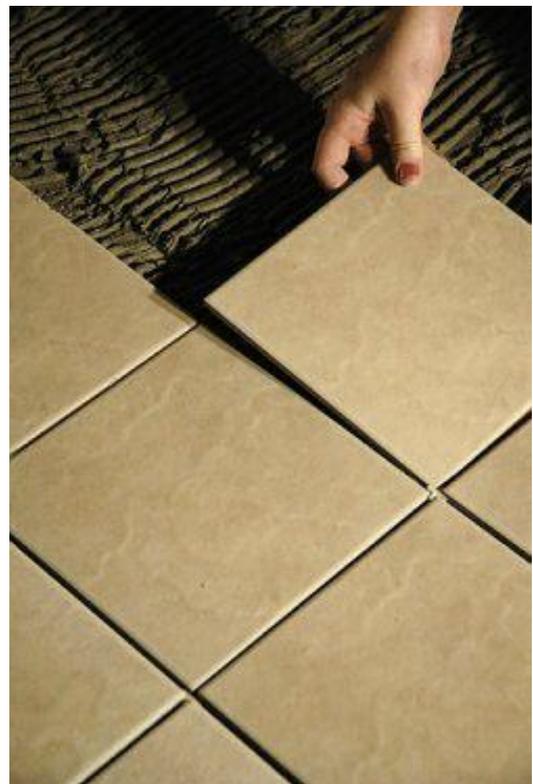
The floor heat is controlled with a thermostat that plugs into any outlet or light switch box.



Once the heating mats are all secured and connected you can run a layer of mortar over them.

You can either let this dry or you can go ahead and apply the tiles.

A lot of tile setters do floor heat and tile at the same time.





Start setting the tiles from the center of the floor outward to the walls. This will be a focal point and we want it to look good.

The floor tile is easy to install. You can use spacers to get a uniform gap between the tiles.



The corners and walls will require some special cuts but it's better to start in the center of your floor so the special cuts are less obvious.



The tile can be cut with a tile cutter pretty easily when it's just flooring we're doing. There will be mostly straight cuts.

In our old bathroom we had tile around the toilet. This tile didn't want to break free at all. In fact it came out in shards when we tried to remove it. I guess we did it right 13 years ago.



In this case, it's easier to put new tile over the old tile. The most important thing is to get a really good connection between the old tile and the new tile.



We put the new toilet in and started to piece the tiles around it.

This is a difficult measurement but you can take a piece of cardboard the size of the tile and make a pattern. (The tile box top is perfect for this by the way.)

Trace the pattern on to the tile and you're good to go.



By the way, I'll go over how to install a toilet in the bathroom plumbing section.

## Grouting tile



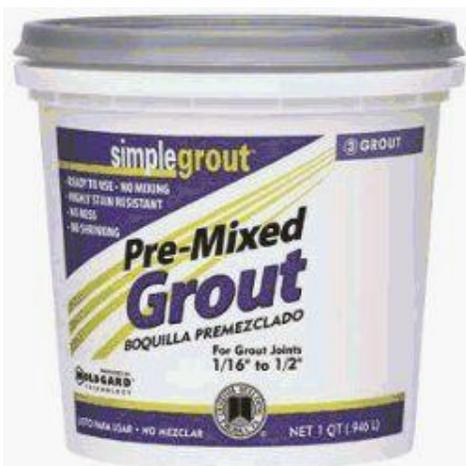
Grouting is the process of filling a sandy mixture of mortar into the joints and cracks of the tile. This mixture dries and becomes really hard and smooth. There are a few tricks to grouting tile to make it easier. You can get grout in different colors according to your preference.



If you have a really big job to do then you may want to buy dry grout mix and water it down.

Most grout mixes require you to let them sit for 10 minutes to cure after you have added water and mixed.

Getting an even mixture of grout with the same consistency throughout your grouting project can be a little tricky though.



Even though premixed grout is more expensive I find that it's really worth it. It has the same consistency all the time which makes all the difference.

You might think it doesn't matter at first but you will change your mind if you have to replace cracked grout lines after they've dried. Been there, done that.



I won't kid you, grouting is harder work than it looks like. It's especially difficult doing ceilings and walls when the grout falls in your face.

It's easier to dab a little grout on the end of the grout float and press it up into the joints in small amounts.



On floors you can put a bunch of grout down and with a sweeping and pressing motion, push it into the joints.

Be sure to go back and forth over the joints and press hard.

Try to fill as much grout in the joints that it will hold.



Be abundant with the layer of grout going into the joints. Go over it several times to make sure the grout level is even with the tile.

Remove all the excess grout by sweeping it with the float and put it back into the grout bucket.



Wipe the tile with a damp grout sponge in a sweeping motion. Be careful to just wipe away excess grout.

Wipe in long sections like you're washing windows.

Rinse the sponge often and clean the grout away from the surface of the tiles as good as you can.



I like to grout everything all at once so we grouted the shower stall, walls, countertop, and trim.

It's best to save the floors for last so you can grout them and then close the door so you don't walk on the grout while it dries.





Grouting is a messy job. Once the grout has dried you will want to remove any grout haze.

This is a film that stays on the tile making it look dingy. It comes off with water, but there are also special grout haze remover products that work really well.

We want the tile to be as beautiful as it can be.



A few days later you can seal the tile with a special tile sealer that keeps it from getting dirty. Grout holds its color a lot better if it has been sealed.

## Bathroom plumbing



Sinks, faucets, drains, toilets, and showers are all easy to connect. Bathroom sinks will need to have the faucets installed and the drain pipe connected.



The bathroom sink will need to have the faucet installed along with the drain stopper.

The drain pipe will be put on with plumber's putty. The sink can then be lowered into the vanity cabinet and the drain pipe will fit into the P-trap.

The P-trap will have a tightening collar.



The hot and cold waterlines can be connected. Make sure to wrap the faucet pipe threads with a few layers of Teflon tape.

Tighten the connection so you don't have leaks.



Larger baths need to have special “filler faucets” to handle high volumes of water.

This tub is 4x6 feet wide and quite deep.

It fills up in about 4 minutes.





Modern toilets are really inexpensive and they look better and are more efficient than they used to be.



A new wax ring will need to be installed on the bottom of the toilet to make a good seal with the septic pipe.



Press the wax ring so that it stays in place.



With two people, set the toilet carefully onto the toilet flange. The floor bolts will help you to line up the toilet.



Tighten the floor bolts carefully so that the toilet sits even.

Be careful to not over tighten the floor bolts. This could break the porcelain.

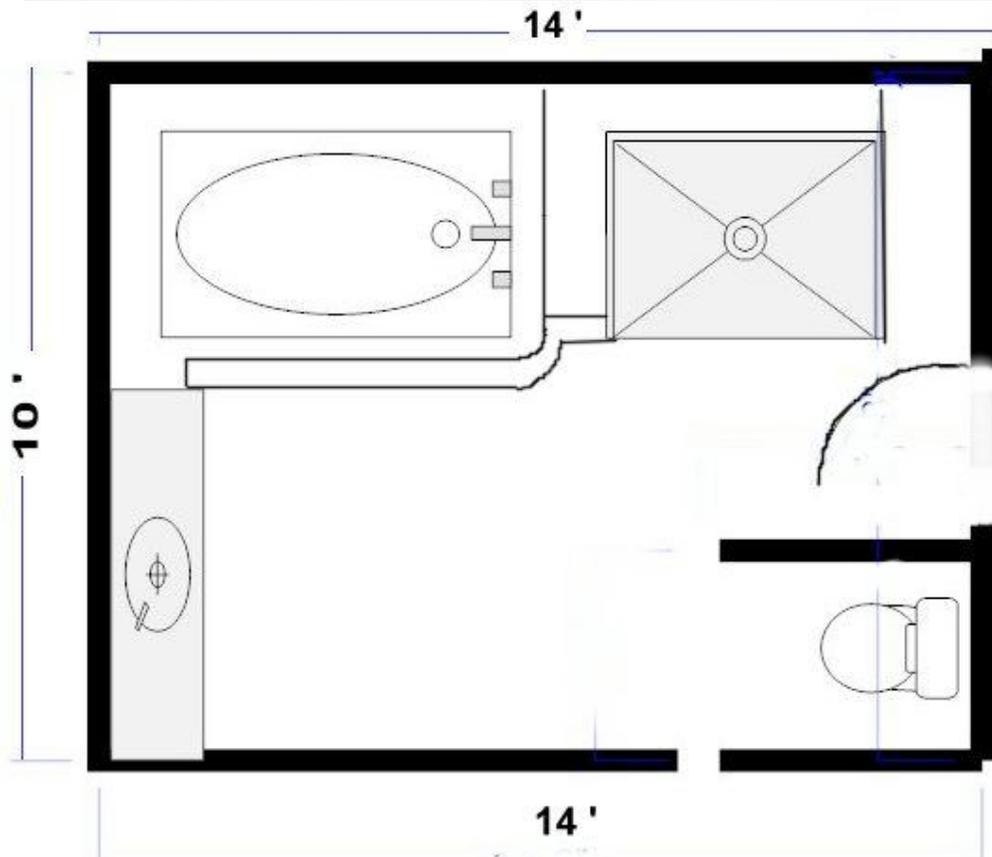


Connect the waterline and turn on the water. Make sure the toilet tank fills up and flushes.



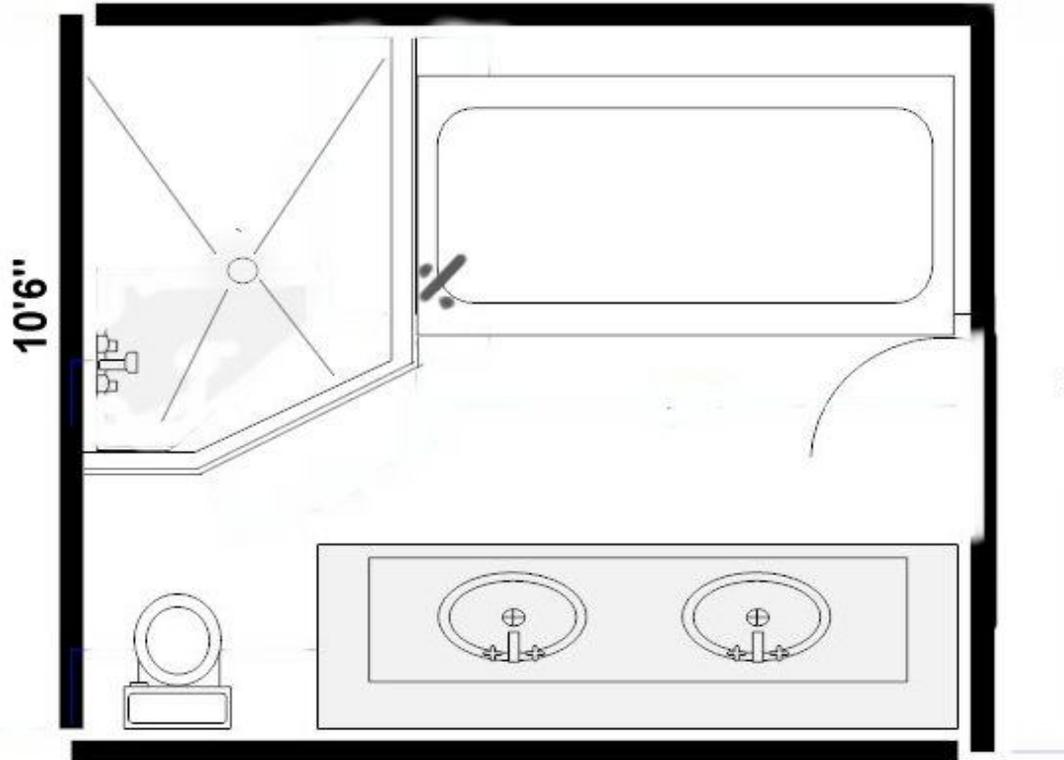
## Modern Bathroom Plans

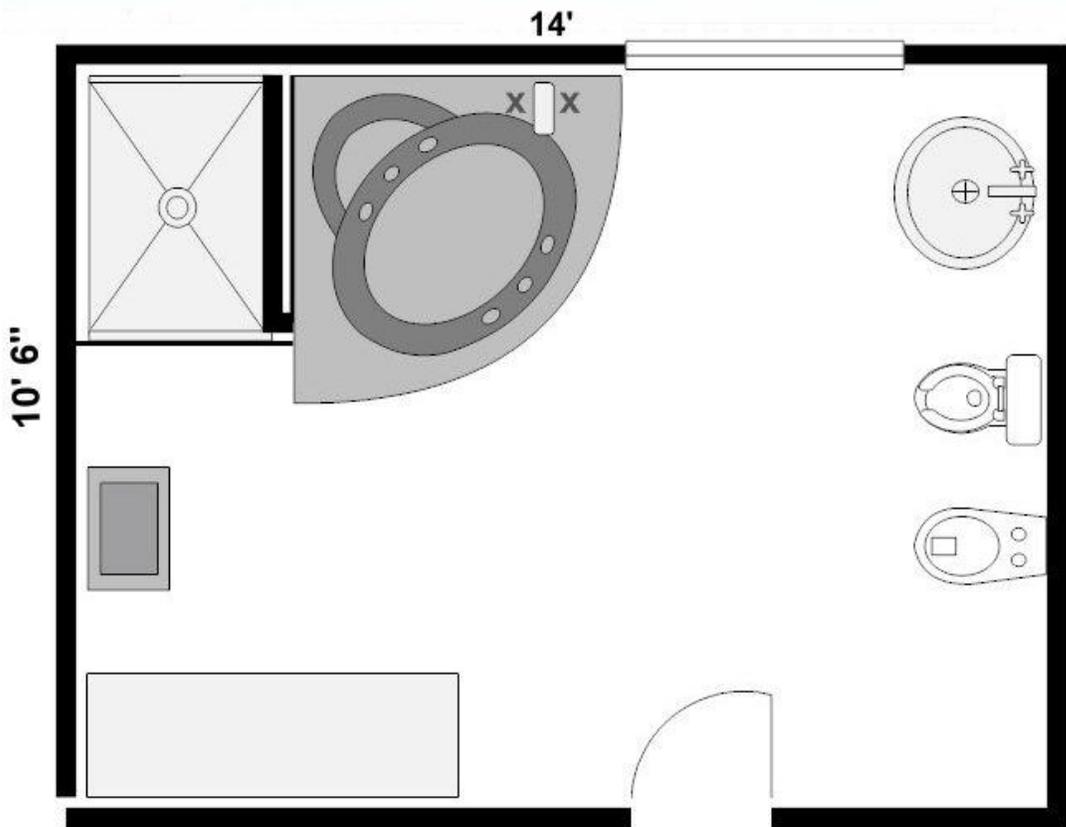
Here are ten modern bathroom plans that fit into smaller homes. The plans can be altered for larger homes, but the idea is to make all the bathroom components fit together so they have a look of balance and style. These are very popular bathroom plans at the moment.





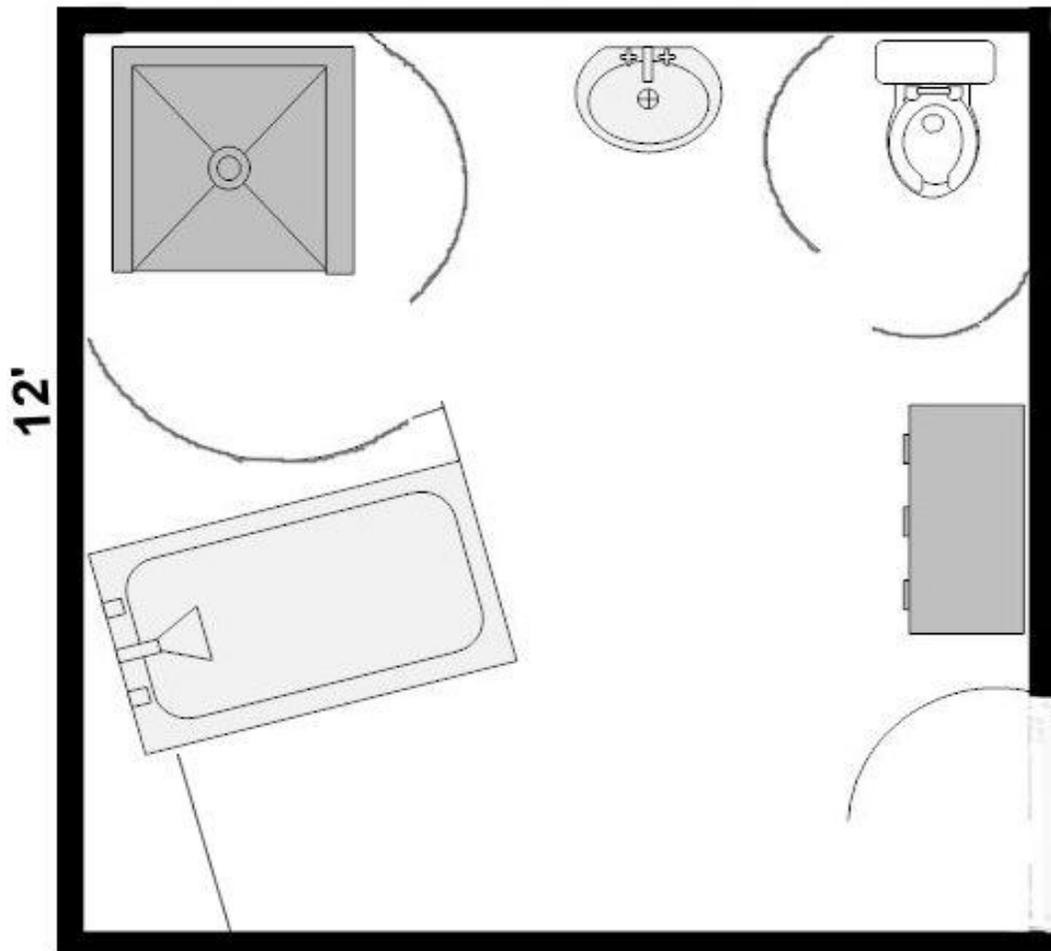
12'







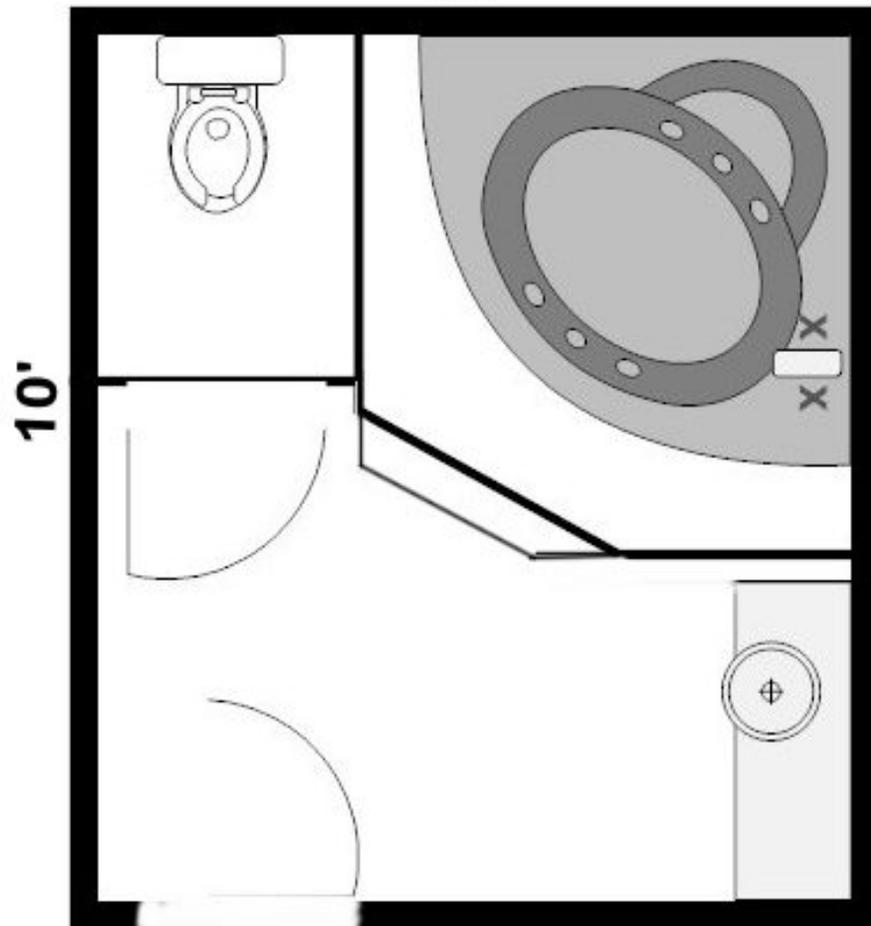
12'



12'

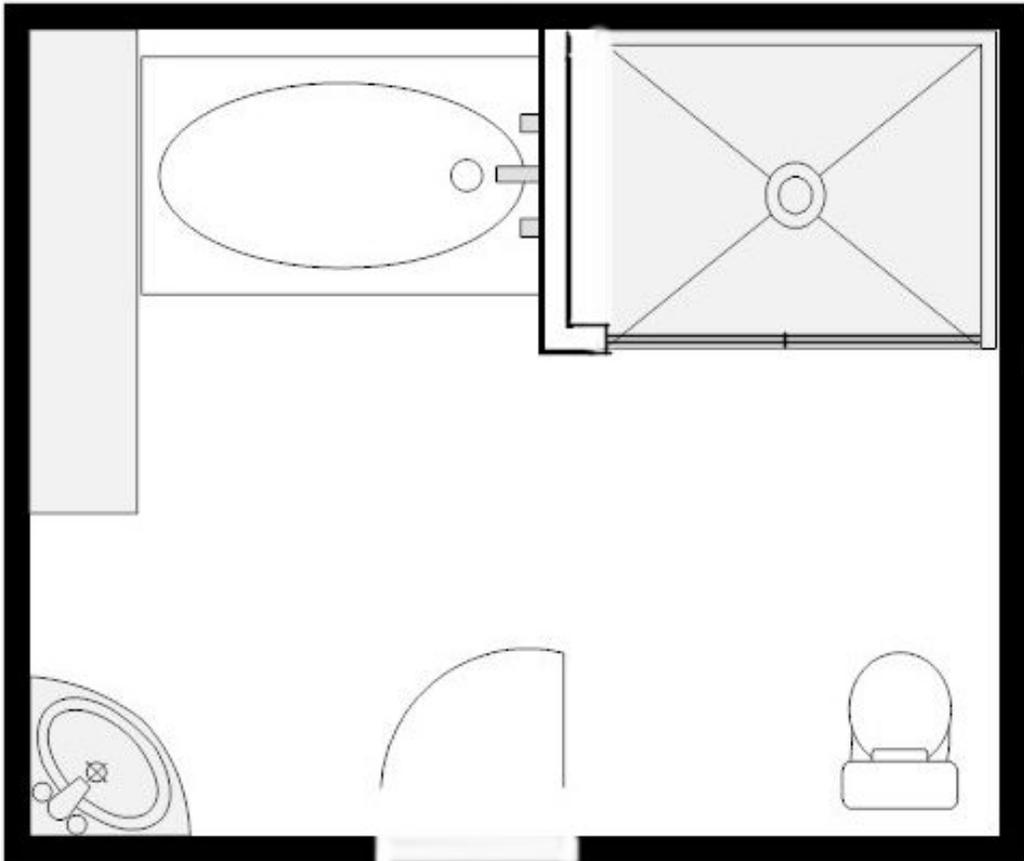


8'6"





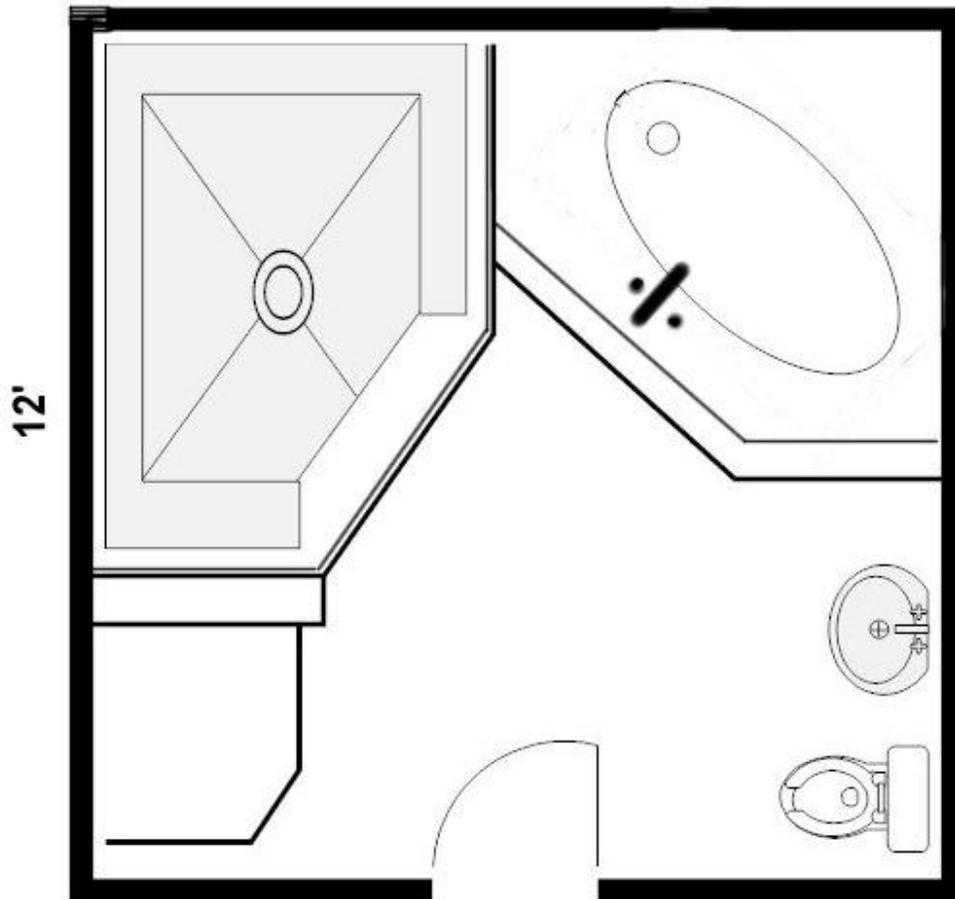
12'



10'

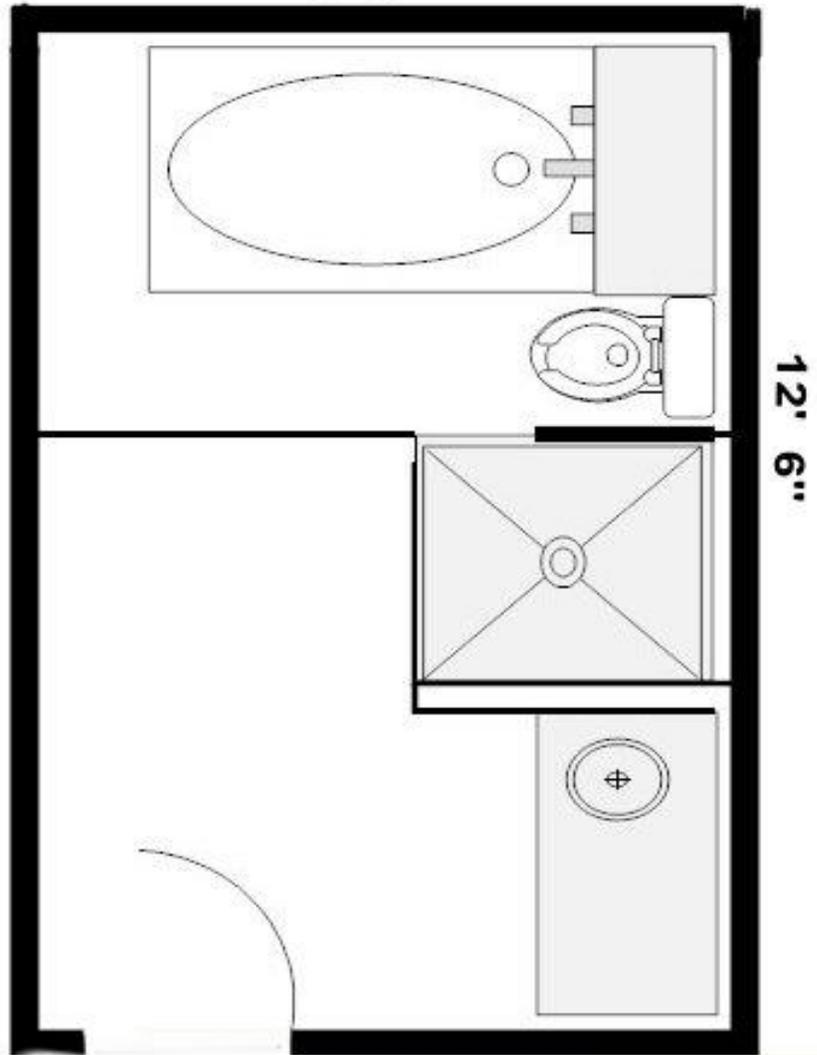


12'



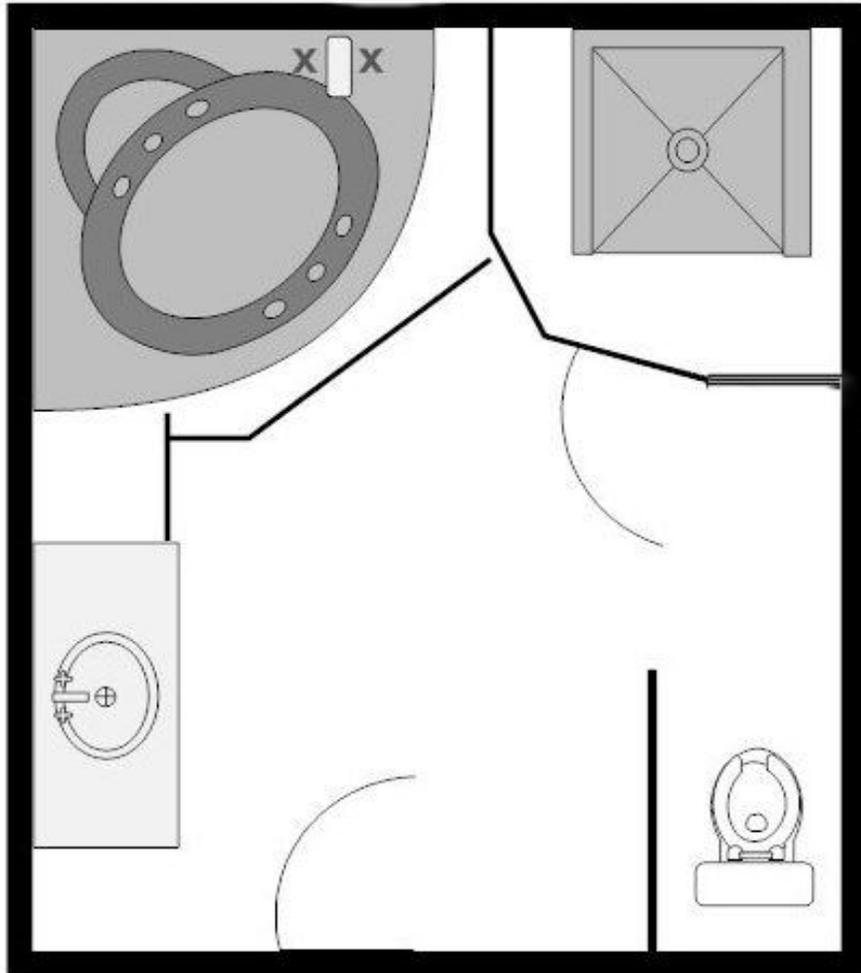


8' 6"





10'



12'



10'

