

Chapter 2—Power Tools

Residential Construction Academy Plumbing

TRUE/FALSE

1. Electrical power tools are connected directly to a power source and should never be used when wet conditions exist.

ANS: T PTS: 1

2. If any power tool is exposed to wet conditions, it should be inspected by proper authorities or service personnel before placing it back in service.

ANS: T PTS: 1

3. Once a GFI has been installed it does not ever have to be tested.

ANS: F

A GFI must be tested with a portable GFI tester frequently to ensure proper protection.

PTS: 1

4. The top of a stepladder can be used for standing.

ANS: F

The top of a stepladder is not used for standing and violates OSHA regulations if used in that manner.

PTS: 1

5. Currently OSHA has no regulation for fall protection.

ANS: F

OSHA dictates that fall protection measures are based on the type of work performed and the location of a specific task.

PTS: 1

6. Personal ear protection should always be worn when using power tools.

ANS: T PTS: 1

7. A twist drill bit is designed to drill holes in metal only.

ANS: F

Twist bits are often referred to as metal bits because they are designed primarily for holes drilled through metal, but they are also used for holes drilled in wood, fiberglass, and plastic materials.

PTS: 1

8. The maximum operating speed of a grinding wheel must be compatible with the grinder being operated.

ANS: T

PTS: 1

COMPLETION

1. A _____ is required by the Occupational Safety and Health Administration (OSHA) for every connection of a tool to a power source.

ANS: Ground Fault Circuit Interrupter

PTS: 1

2. Two common sizes of stepladders used in interior residential construction work are _____ and _____.

ANS: 6'-0", 8'-0"

PTS: 1

3. An extension ladder must be set up with the top of the ladder at least _____ above the point where the ladder contacts the roof edge.

ANS: 3'-0"

PTS: 1

4. The bottom of the ladder should be approximately _____ of the length the ladder is extended to ensure a safe angle is established.

ANS:
one fourth
1/4

PTS: 1

5. The most common method of fall protection is a _____ and a _____.

ANS: body harness, securing lanyard

PTS: 1

6. Three common drills used by plumbers to drill wood products are the _____, the _____ and the _____.

ANS: pistol, right angle, hole hawg

PTS: 1

7. Most drills are provided with a removable _____ or _____ that can be installed in various designated locations on the tool and must be installed prior to using.

ANS: side handle, top handle

PTS: 1

8. A _____ drill has its chuck placed at a 90°, or right, angle from the body of the tool.

ANS: right angle

PTS: 1

9. Most right angle drills allow the user to rotate the placement of the chuck _____° to adjust to any workspace.

ANS: 360

PTS: 1

10. A _____ gets its name because of its design, which resembles a handgun.

ANS: pistol drill

PTS: 1

11. The most common pistol drill style is a _____" type, which can handle larger diameter drill bit shanks that are used with other drill types; it offers more power for drilling holes than the _____" type.

ANS: 1/2, 3/8

PTS: 1

12. The _____ drill has a fixed drill chuck position tucked further in its body design than other drills for drilling in small spaces.

ANS: hole hawg

PTS: 1

13. The typical sizes of auger bits used by most residential plumbers are _____" to _____".

ANS: 3/4, 1-1/4

PTS: 1

14. _____ bits are the most common drill bit in new residential plumbing installations and are specifically designed for drilling wood products.

ANS: Power bore

PTS: 1

15. The most popular sizes of the power bore bit used by a plumber are _____", _____", _____", and _____".

ANS: 1-1/8, 2, 2-9/16, 3-5/8

PTS: 1

16. _____ bits are commonly used for drilling through a variety of thin materials and finished surfaces, such as fiberglass shower walls, countertops, or cabinets.

ANS: Hole saw

PTS: 1

17. If a ladder is extended 20' from the ground to the top of the ladder, the bottom of the ladder should be _____ feet from the wall or other structural reference point that the top of the ladder touches.

ANS: Five feet

PTS: 1

SHORT ANSWER

1. What is a lifeline and what is its purpose?

ANS:

A lifeline is an approved rope or metal cord fixed at two secure points to which you connect the lanyard in order to provide mobility while working.

PTS: 1

2. What is a drill?

ANS:

A drill is essentially an electric motor, housed within a tool design, that is manually activated to rotate an internal shaft that is connected to a drill bit chuck, which in turn rotates a drill bit.

PTS: 1

3. What is the purpose of a hammer drill?

ANS:

Drilling into or through concrete.

PTS: 1

4. What are the most common types of drill bits and saw blades commonly used in residential plumbing?

ANS:

Twist Bit

Auger Bit

Speed Bit

Power Bore Bit

Hole Saw Bit

Concrete Bit

Step Bit

PTS: 1

5. Describe how a reciprocating saw works.

ANS:

a reciprocating saw operates in a piston-like motion by thrusting a saw blade forward and backward in a sawing motion.

PTS: 1

6. What is the purpose of a saber saw?

ANS:

To cut holes in countertops to install sinks and to make circular cuts.

PTS: 1