

Carpentry & Building Construction

Chapter 30 Mechanicals

Section 30.1 Assessment Answers

1. heating/ventilating/air-conditioning
2. The rough-in stage and the finishing stage.
3. A trap is a curved section of drainpipe that is located beneath a fixture. It prevents sewer gases in the waste pipes from entering the house but does not block drainage.
4. Joists should be reinforced by nailing a 2x scab to each side of the altered member, using 12d nails.
5. $c=21.2132$ or $21 \frac{3}{16}$

Section 30.2 Assessment Answers

1. A measure of electrical current.
2. To shut off power in a circuit if it detects overloads that might lead to a fire.
3. A combination of slots and grounding holes sized to accept the prongs of an electrical plug.
4. The outer sheathing of the cable is stripped off to expose the individual conductors.
5. $I = 115 \div 8 = 14.375 \sim 15$. Therefore, a 15-amp circuit breaker will be needed.

Section 30.3 Assessment Answers

1. electricity, coal, natural gas, oil, and wood
2. Heated air cools and sinks to the floor and flows into the return air register.
3. The fins maximize the transfer of heat to the surrounding air.
4. The air handler draws in warmed house air through ducts and blows it over the evaporator coils. Refrigerant in the coils absorbs heat from the air. The cooled air is then distributed to the house.
5. Refrigerant changes from a liquid to a gas as it absorbs heat. Heat is a form of energy. Heat is the energy of molecules in motion. High amounts of heat cause molecules to move rapidly. When enough heat is applied the liquid converts to a gaseous state.