When calculating the number of BTU a person should have for an air conditioning system, multiply the square feet of the living area by the "exposure factor" and then by the "climate factor". For the location that an air conditioner is being installed, the exposure factor is 31, and the climate factor is 0.92. The rectangular residence has a width of 21 feet and 5 inches with a length of 33 feet and 10 inches. What is the closest BTU rating necessary for the residence?

(target: Solve problems involving surface area and volume of solids.) pt 04

When calculating the number of BTU a person should have for an air conditioning system, multiply the square feet of the living area by the "exposure factor" and then by the "climate factor". For the location that an air conditioner is being installed, the exposure factor is 29, and the climate factor is 0.94. The rectangular residence has a width of 27 feet and 3 inches with a length of 29 feet and 2 inches. What is the closest BTU rating necessary for the residence?

(target: Solve problems involving surface area and volume of solids.) pt 04

Plans are submitted for a 13-foot square garage. The 169 square feet of the shingles weigh 6 pounds per square foot. The joists supporting the roof weigh 1.45 pounds per square foot, and the plywood sheeting weighs 1.48 pounds per square foot. If the two side walls carry the entire weight of the finished roof, how much weight do the side walls support per linear foot? Express your answer to the nearest tenth.

(target: Solve problems involving surface area and volume of solids.) pt 04

Plans are submitted for a 27-foot square garage. The 729 square feet of the shingles weigh 4.9 pounds per square foot. The joists supporting the roof weigh 1.51 pounds per square foot, and the plywood sheeting weighs 1.47 pounds per square foot. If the two side walls carry the entire weight of the finished roof, how much weight do the side walls support per linear foot? Express your answer to the nearest tenth.

(target: Solve problems involving surface area and volume of solids.) pt 04

Sometimes statistics are gathered by fire prevention personnel. If a particular forest area of 15,500 acres has had 199 fires during the past six years, how many average yearly fires would this be per thousand acres? Express your answer to the nearest tenth.

(target: Solve problems involving surface area and volume of solids.) pt 04

Sometimes statistics are gathered by fire prevention personnel. If a particular forest area of 39,500 acres has had 184 fires during the past five years, how many average yearly fires would this be per thousand acres? Express your answer to the nearest tenth.

(target: Solve problems involving surface area and volume of solids.) pt 04
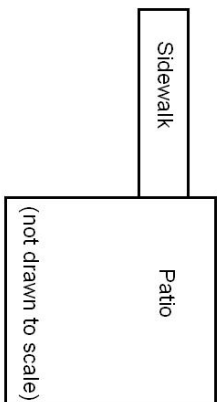

A pilot is flying a plane that consumes $9\frac{1}{2}$ gallons of fuel per hour. If there are 24 gallons of fuel remaining, how many minutes will the fuel last? Round your answer to the nearest minute.

(target: Solve problems involving surface area and volume of solids.) pt 04

A pilot is flying a plane that consumes $6\frac{15}{16}$ gallons of fuel per hour. If there are 18 gallons of fuel remaining, how many minutes will the fuel last? Round your answer to the nearest minute.
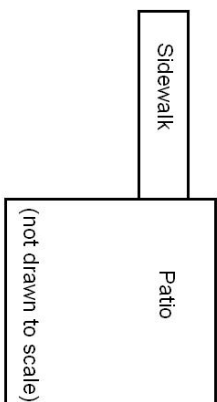
(target: Solve problems involving surface area and volume of solids.) pt 04

Brooke has decided to brick a sidewalk and a patio in her back yard. The sidewalk is rectangular with a width of 40 inches and length of 14 feet. The square patio measures 22 feet and 7 inches on each side. The rectangular bricks that Brooke picked will cover 4 inches by 11 inches each. What is the minimum number of bricks she should order for the project? Plan for no waste of partial bricks in your answer.

Sidewalk	Patio

(not drawn to scale)

(target: Solve problems involving surface area and volume of solids.) pt 04

Brooke has decided to brick a sidewalk and a patio in her back yard. The sidewalk is rectangular with a width of 40 inches and length of 14 feet. The square patio measures 22 feet and 3 inches on each side. The rectangular bricks that Brooke picked will cover 5 inches by 7 inches each. What is the minimum number of bricks she should order for the project? Plan for no waste of partial bricks in your answer.

Sidewalk	Patio

(not drawn to scale)

(target: Solve problems involving surface area and volume of solids.) pt 04

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