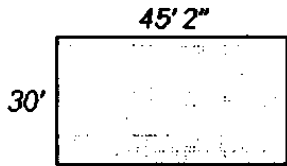


## How to Calculate the Area of a Room or Space



**Area of rectangle = length x width**

Therefore:

$$45.16 \text{ ft} \times 30 \text{ ft} = 1354.8 \text{ square feet}$$

licensed capacity:

$$1354.8 / 35 = 38 \text{ children}$$



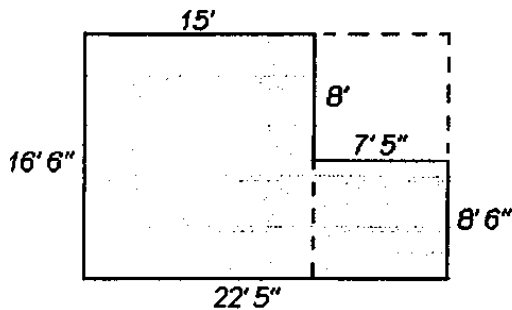
**Area of right triangle = (0.5) x base x height**

Therefore:

$$0.5 \times 15.25 \text{ ft} \times 32 \text{ ft} = 244 \text{ square feet}$$

licensed capacity:

$$244 / 35 = 6 \text{ children}$$



**Area of L-shaped room:**

1st method...

Area = Total rectangular area - excluded area

$$(16.5 \text{ ft} \times 22.41 \text{ ft}) - (8 \text{ ft} \times 7.41 \text{ ft}) = 310.5 \text{ square ft}$$

2nd method...

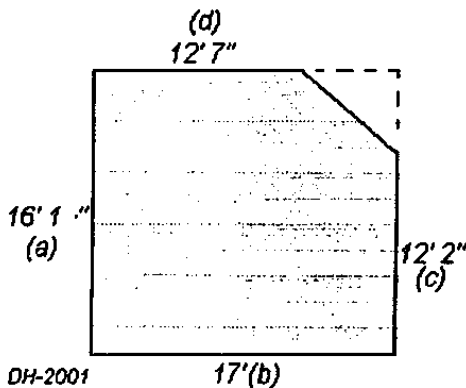
Split up room into two rectangles.

Area = 1st rectangle + 2nd rectangle

$$(16.5 \text{ ft} \times 15 \text{ ft}) + (8.5 \text{ ft} \times 7.41 \text{ ft}) = 310.5 \text{ square ft}$$

licensed capacity:

$$310.5 / 35 = 8 \text{ children}$$



**Area of room with fireplace:**

Area = Total rectangular area - excluded triangular area  
 $= [a \times b] - [0.5(a - c)(b - d)]$

$$[16.83 \text{ ft} \times 17 \text{ ft}] - [0.5 \times (16.83 - 12.16) \times (17 - 12.58)] = 275.8 \text{ sq ft}$$

licensed capacity:

$$275.8 / 35 = 7 \text{ children}$$