# Dream House Project Area and Perimeter

## Measurements and Dimensions Worksheet 1

### First Floor Area

#### Books and Board Games Room

It is a rectangle with a base of 26 ft. and a height of 28 ft.

$A = b \times h \;\; A = 26\,ft. \times 28\,ft. \;\; A = 728\,ft^2$

#### Pool

It is a rectangle with a base of 32 ft. and a height of 18 ft.

$A = b \times h \;\; A = 32\,ft. \times 18\,ft. \;\; A = 576\,ft.^2$

#### Kitchen

It is a rectangle with a length of 32 ft. and a width of 16 ft. and with a triangular corner cut off. The triangle has a base of 4 ft. and a height of 4 ft.

$A = (l \times w) - (\frac{1}{2}bh) \;\; A = (32\,ft. \times 16\,ft.) - (\frac{1}{2} \times 4\,ft. \times 4\,ft.) \;\; A = 512\,ft.^2 - 8\,ft.^2 \;\; A = 504\,ft.^2$

#### Living Room

It is a rectangle with a base of 26 ft. and a height of 16 ft.

$A = b \times h \;\; A = 26\,ft. \times 16\,ft. \;\; A = 416\,ft.^2$

#### Hallway

It is a rectangle with a base of 32 ft. and a height of 8 ft.

$A = b \times h \;\; A = 32\,ft. \times 8\,ft. \;\; A = 256\,ft.^2$

#### Video Game Room

It is a rectangle with a base of of 24 ft. and a height of 26 ft.

$A = b \times h \;\; A = 24\,ft. \times 26\,ft. \;\; A = 624\,ft.^2$

# Measurements and Dimensions Worksheet 2

## Stairs 1

It is a triangle
with a base of 14 ft. and a height of 14 ft.
$A = \frac{1}{2}bh \;\; A = \frac{1}{2} \times 14\,ft. \times 14\,ft. \;\; A = 98\,ft.^2$

## Tennis Court

Two shapes make up the tennis court:

1. A isosceles trapezoid with the bases of 30 ft. and 2 ft. and a height of 14 ft.
   $A = \frac{1}{2}(b_1 + b_2)h \;\; A = \frac{1}{2}(30\,ft. + 2\,ft.)14\,ft. \;\; A = 224\,ft.$
2. A square with sides of 18 ft.
   $A = s^2 \;\; A = (18\,ft.)^2 \;\; A = 324\,ft.^2$

The total area of the tennis court is $224\,ft.^2 + 324\,ft.^2 = 548\,ft.^2$

## Restrooms

It is a square with sides of 4 ft.
$A = s^2 \;\; A = (4\,ft.)^2 \;\; A = 16\,ft.^2$

# Measurements and Dimensions Worksheet 3

## Second Floor Area

### Closet

It is a rectangle with a base of 2 ft. and a height of 8 ft.

$A = b \times h \;\; A = 2\,ft. \times 8\,ft. \;\; A = 16\,ft.^2$

### Books Room

It is a rectangle with a base of 12 ft. and a height of 38 ft.

$A = b \times h \;\; A = 12\,ft. \times 38\,ft. \;\; A = 456\,ft.^2$

### Master Bedroom

It is a rectangle with a base of 10 ft. and a height of 58 ft.

$A = b \times h \;\; A = 10\,ft. \times 58\,ft. \;\; A = 580\,ft.^2$

### Master Bathroom

It is a rectangle with a base of 6 ft. and a height of 4 ft.

$A = b \times h \;\; A = 6\,ft. \times 4\,ft. \;\; A = 24\,ft.^2$

### Bedroom

It is a triangle with a base of 24 ft. and a height of 24 ft.

$A = \frac{1}{2}bh \;\; A = \frac{1}{2} \times 24\,ft. \times 24\,ft. \;\; A = 288\,ft.^2$

### Instrument Room

It is a rectangle with a base of 18 ft. and a height of 28 ft.

$A = b \times h \;\; A = 18\,ft. \times 28\,ft. \;\; A = 504\,ft.^2$

### Stairs 2

It is a rectangle with a base of 8 ft. and a height of 2 ft.

$A = b \times h \;\; A = 8\,ft. \times 2\,ft. \;\; A = 16\,ft.^2$

# Measurements and Dimensions Worksheet 4

## Toys Room

It is a rectangle with a base of 22 ft. and a height of 8 ft.

$A = b \times h \;\; A = 22\,ft. \times 8\,ft. \;\; A = 176\,ft.^2$

## Front Porch

It is a rectangle with a base of 24 ft. and a height of 14 ft.

$A = b \times h \;\; A = 24\,ft. \times 14\,ft. \;\; A = 336\,ft.^2$

# Measurements and Dimensions Worksheet 5

## Total Area of Dreamhouse

| | |
|---|---|
| Books and Board Games | $728\ ft^2$ |
| Pool | $576\ ft^2$ |
| Kitchen | $504\ ft^2$ |
| Living Room | $416\ ft^2$ |
| Hallway | $256\ ft^2$ |
| Video Game Room | $624\ ft^2$ |
| Stairs 1 | $98\ ft^2$ |
| Restrooms | $16\ ft^2$ |
| Tennis Court | $548\ ft^2$ |
| Closet | $16\ ft^2$ |
| Books Room | $456\ ft^2$ |
| Master Bedroom | $580\ ft^2$ |
| Master Bathroom | $24\ ft^2$ |
| Bedroom | $288\ ft^2$ |
| Instrument Room | $504\ ft^2$ |
| Stairs 2 | $16\ ft^2$ |
| Toys Room | $176\ ft^2$ |
| Front Porch | $+\ 336\ ft^2$ |
| Total Area | $6162\ ft^2$ |

## Perimeter

### Perimeter of Rectangular Stairs 2

$P = 2l + 2w \quad P = 2(8\ ft) + 2(2\ ft) = 20\ ft$

### Perimeter of Rectangular Master Bathroom

$P = 2l + 2w \quad P = 2(6\ ft) + 2(4\ ft) = 20\ ft$

### Perimeter of Square Restrooms

$P = 4s \quad P = 4(4\ ft) = 16\ ft$

## Perimeter of Rectangular Living Room

$P = 2l + 2w \quad P = 2(26\,ft) + 2(16\,ft) = 84\,ft$