



THE VIRGINIA  
ADULT LEARNING  
RESOURCE CENTER

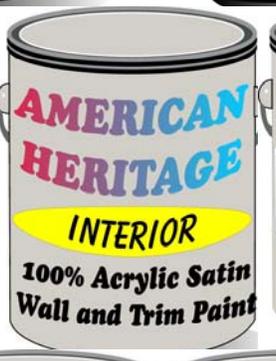
Virginia Commonwealth University

**Painting**  
**Lesson Three: Buying Paint**  
**Student Handouts**

*Building Basics was paid for under an EL Civics grant from the U. S. Department of Education administered by the Virginia Department of Education. It was paid for under the Adult Education and Family Literacy Act of 1998; however, the opinions expressed herein do not necessarily represent the position or policy of the U. S. Department of Education, and no official endorsement by the U. S. Department of Education should be inferred. This document was designed and created by the Virginia Adult Learning Resource Center at Virginia Commonwealth University, 817 West Franklin Street, Suite 221, P.O. Box 842037, Richmond, VA 23284-2020. It may be reproduced for nonprofit, educational purposes only.*



**PAINT ON SALE  
50% OFF**

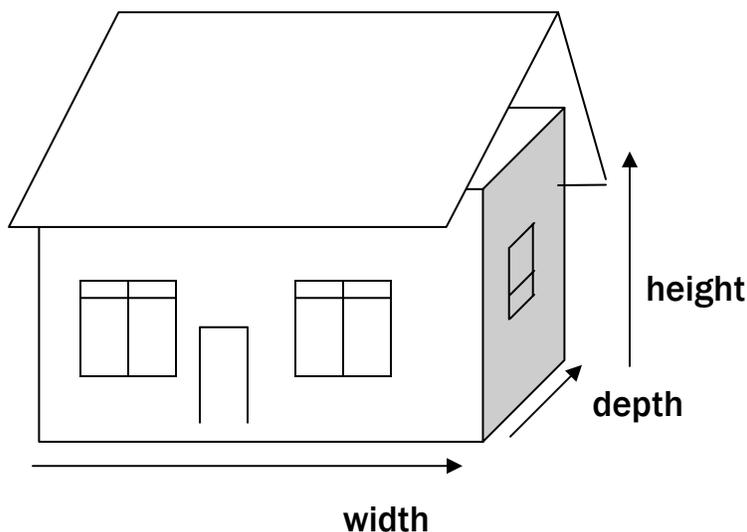




## Activity #2: Paint Calculation Practice

### Practice A Instructions

To find out how much paint you need to paint the exterior of a structure, you need to know the **dimensions** of the structure. These are **the width, the depth, and the height** of the structure.



### Sample Dimensions

Width	55'
Depth	30'
Height	38'

**Step 1** Add the width and depth of the four sides of the structure to get the **perimeter** or the circumference of the structure.

$$\text{front width} + \text{right depth} + \text{back width} + \text{left depth} = \text{perimeter or circumference}$$

$$55' + 30' + 55' + 30' = 170'$$

**Step 2** Multiply the **perimeter** by the height of the structure to get **the total surface area** of the outside walls you will paint.

$$170' \times 38' = 6460 \text{ sq ft}$$

**Step 3** Count the **standard windows**. Multiply this number by 15 sq ft.

Count the **large windows**. Multiply this number by 21 sq ft.

Count the **single doors**. Multiply this number by 25 sq ft.

Count the **double doors**. Multiply this number by 40 sq ft.

**Non-painted area in sq ft**

standard windows	4	x	15 sq ft =	
large windows	4	x	21 sq ft. =	
single doors	2	x	25 sq ft =	
double doors	1	x	40 sq ft. =	+
	<b>Non-painted area in sq ft</b>			

**Step 4** Add the number of square feet for all of the windows and doors.

**Step 5** Subtract the **total number of square feet of non-painted areas** **from** the **total surface area** that you will paint.

Total Surface Area                  6460 sq ft  
Non-painted Area                    -    \_\_\_\_\_ sq ft  
**Paint Surface Area**

**Step 6** Divide the paint surface area **by 400 sq ft.** (One gallon of paint covers about 400 sq ft.)

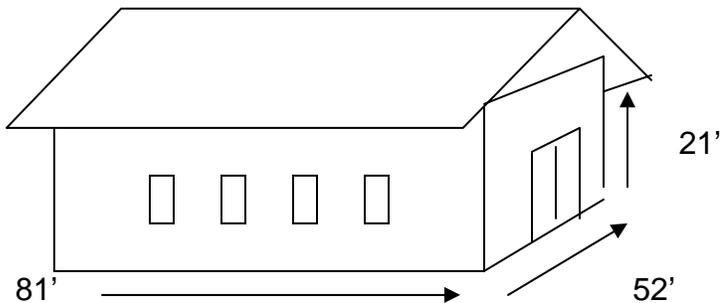
400  $\sqrt{\hspace{2cm}}$



Number of gallons of paint needed: \_\_\_\_\_ gal

## Practice B Instructions

Do this practice together with your group.



Calculate the number of gallons you need to paint the sides of this building.

**Step 1** Add the width and depth of the four sides of the structure to get the **perimeter** or the circumference of the structure.

front width + right depth + back width + left depth = perimeter or circumference

\_\_\_\_\_ft + \_\_\_\_\_ft + \_\_\_\_\_ft + \_\_\_\_\_ft = \_\_\_\_\_ft

**Step 2** Multiply the **perimeter** by the height of the structure to get **the total surface area** of the outside walls you will paint.

\_\_\_\_\_ft x \_\_\_\_\_ft = \_\_\_\_\_sq ft

**Step 3** Count the **standard windows**. Multiply this number by 15 sq ft.

Count the **large windows**. Multiply this number by 21 sq ft.

Count the **single doors**. Multiply this number by 25 sq ft.

Count the **double doors**. Multiply this number by 40 sq ft.



### Activity #3: How Much Paint Will You Need?

## Handout A



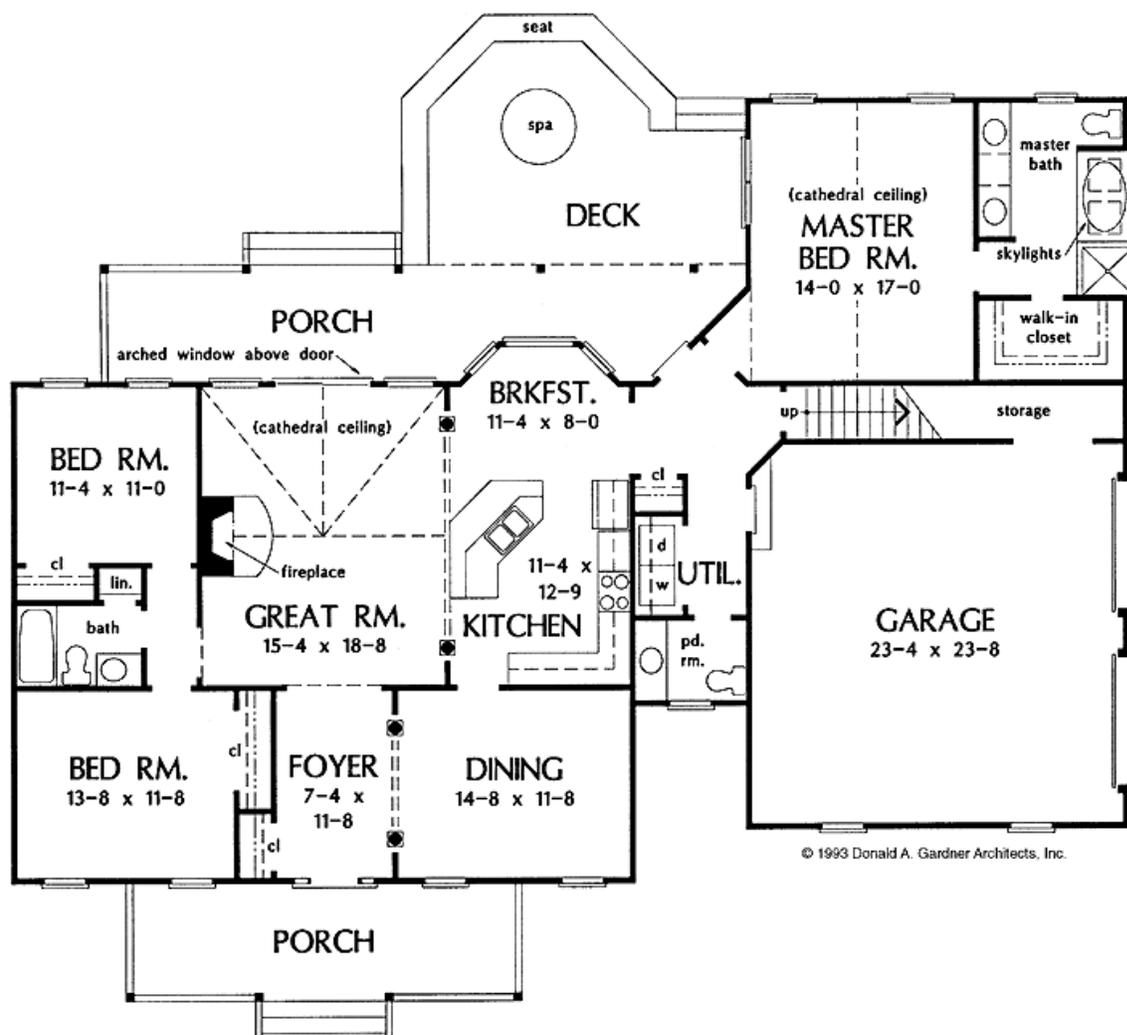
## House #1 "Simply the Best"



front view



rear view



Plan HWEPL06999

<http://www.eplans.com>

Used with permission from eplans.com

Instructions: Estimate the number of gallons of paint you will need to paint the walls in these rooms. The ceiling height in these rooms is 9.0 ft.

- the three bedrooms
- the dining room
- the foyer

Room	Total room area in sq ft	Unpainted areas in sq ft	Room area to be painted in sq ft	Number of gallons needed
Bedroom #1				
Bedroom #2				
Bedroom #3				
Foyer				
Dining room				
			<b>Total gallons</b>	

### Activity #3: How Much Paint Will You Need?

## Handout B

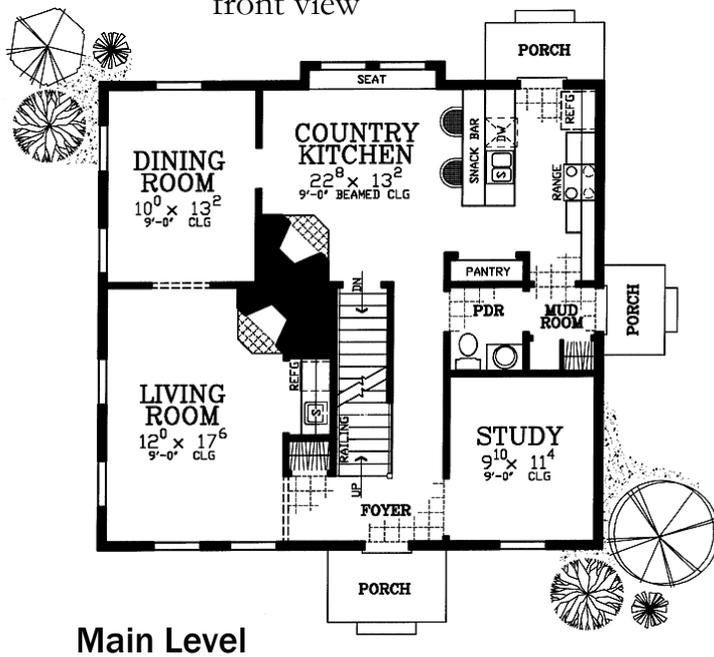


## House #2 Cape Cod Charmer



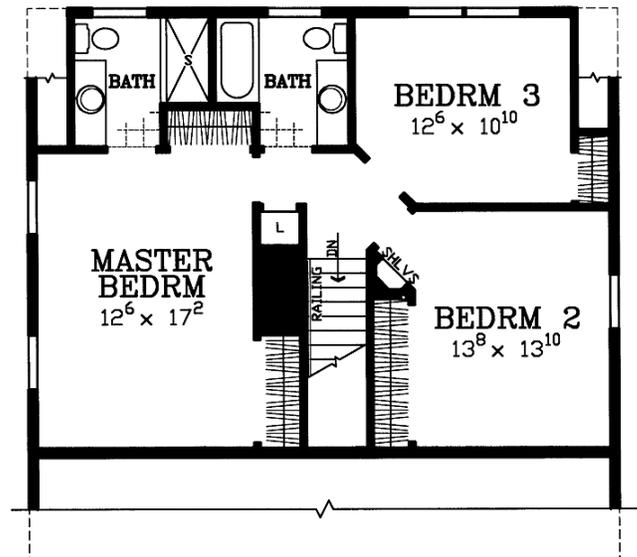
front view

rear view



Main Level

Second Level



Plan HWEPL00515  
<http://www.eplans.com>  
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Instructions: Estimate the number of gallons of paint you will need to paint these rooms. The ceiling height in each room is 9.0 ft.

- the living room
- the three bedrooms
- the study
- the dining room

Room	Total room area in sq ft	Unpainted areas in sq ft	Room area to be painted in sq ft	Number of gallons needed
Living room				
Bedroom #1				
Bedroom #2				
Bedroom #3				
Study				
Dining room				
			<b>Total gallons</b>	



Instructions: Estimate the number of gallons of paint you will need to paint the walls in these rooms. The ceiling height in each room is 9.0 ft.

- the living room (great room)
- two bedrooms
- master bedroom
- the bedroom/study
- the dining room

Room	Total room area in sq ft	Unpainted areas in sq ft	Room area to be painted in sq ft	Number of gallons needed
Living room				
Bedroom #1				
Bedroom #2				
Master Bedroom				
Bedroom/Study				
Dining room				
			<b>Total gallons</b>	