

Room name	X *	Width ↔	Length ↕	Minimum Area	Our Area	Maximum Area	Cost
Kitchen				130 ft. <sup>2</sup>		260 ft. <sup>2</sup>	
Dining Room				140 ft. <sup>2</sup>		280 ft. <sup>2</sup>	
Living/Family Room				230 ft. <sup>2</sup>		460 ft. <sup>2</sup>	
Master Bedroom				180 ft. <sup>2</sup>		360 ft. <sup>2</sup>	
Bedroom #2				110 ft. <sup>2</sup>		220 ft. <sup>2</sup>	
Bedroom #3				110 ft. <sup>2</sup>		220 ft. <sup>2</sup>	
Master Bathroom				80 ft. <sup>2</sup>		160 ft. <sup>2</sup>	
Full Bathroom #2				50 ft. <sup>2</sup>		100 ft. <sup>2</sup>	
Half Bathroom				20 ft. <sup>2</sup>		50 ft. <sup>2</sup>	
Office, Study, or Library				80 ft. <sup>2</sup>		200 ft. <sup>2</sup>	
Game or Media Room				140 ft. <sup>2</sup>		320 ft. <sup>2</sup>	
Foyer/Entryway				20 ft. <sup>2</sup>		100 ft. <sup>2</sup>	
Laundry				30 ft. <sup>2</sup>		60 ft. <sup>2</sup>	
<b>Total closet space not included in other rooms</b>				-----		-----	
<b>All rooms not included above</b>				-----		-----	
<b>Total hall space</b>				0 ft. <sup>2</sup>		150 ft. <sup>2</sup>	
<b>Entire house without the garage</b>				2000 ft. <sup>2</sup>		2600 ft. <sup>2</sup>	
<b>Garage</b>		20 ft.	24 ft.	480 ft. <sup>2</sup>	480 ft. <sup>2</sup>	480 ft. <sup>2</sup>	\$24,000
<b>***** Total of living area and garage *****</b>				2480 ft. <sup>2</sup>		3080 ft. <sup>2</sup>	
<b>Land</b>		88 ft.	112 ft.	9,856 ft. <sup>2</sup>	9,856 ft. <sup>2</sup>	9,856 ft. <sup>2</sup>	\$20,000
<b>***** Grand total inside cost *****</b>							

\* For rooms that are not rectangles, place an X in the column above. For width and length, measure the majority of the room. Calculate the exact area of the room (it will not be the listed width x the listed length).

The following is a list of features that may be included outside of the normal house and garage. The cost of each feature is listed next to each one.

**Linear foot:** Same as a regular foot. Linear means you are **not** talking about square feet.

**Every 10 linear feet:** Means the item is sold in increments of 10.

ITEM	Cost	Typical Dimensions	Our Dimensions Or Area	Cost
<b>LANDSCAPING</b>				
<b>Trees/Bushes</b>	\$3000 (all the trees/bushes you want)		√	\$3,000
<b>Garden</b>	\$10 per square foot			
<b>Pond</b>	\$25 per square foot			
<b>Stone/Brick Path/Walkways</b>	\$1000 per every 10 linear feet	3 feet wide		
<b>Fencing</b>	\$25 per linear foot (Not needed on property line)			
<b>Hedge</b>	\$15 per foot			
<b>FUN AND GAMES</b>				
<b>Swimming Pool</b>	\$12,000 + \$30 per square foot	Max: 18 ft. by 36 ft.		
<b>Tetherball Court</b>	\$500	10 ft. diameter		
<b>Trampoline</b>	\$500, \$750, \$1000, \$1500	8, 10, 12, or 14 ft. diameter		
<b>Hot Tub</b>	\$160 per square foot + cost of deck (required) around hot tub	Min: 20 sq. ft. Max: 50 sq. ft.		
<b>Horseshoe Court</b>	\$500	6 ft. by 50 ft.		
<b>Mini-Basketball Court</b>	\$10 per square foot	Min: 14 by 18 ft. Max: 25 by 40 ft.		
<b>Mini-Volleyball Court</b>	\$6000	15 ft. by 30 ft.		
<b>Sandbox</b>	\$10 per square foot	12 ft. by 12 ft.		
<b>Firepit</b>	\$750	4 ft. diameter		
<b>DETACHED BUILDINGS</b>				
<b>Utility Shed</b>	\$10,000	10 ft. by 12 ft.		
<b>Trash Can Shed</b>	\$2500	3 ft. by 5 ft.		
<i>more ideas on the back.....</i>				

ITEM	Cost/Dimensions	Typical Dimensions	Our Dimensions Or Area	Cost
<b>ATTACHED TO THE HOUSE</b>				
<b>Wheelchair Ramp</b>	\$300 per linear foot	4 feet wide		
<b>Patio/Deck</b>	\$40 per square foot			
<b>Porch (enclosed with screens)</b>	\$70 per square foot	8 ft. by 14 ft.		
<b>Porch (open)</b>	\$25 per square foot	24 ft. by 16 ft.		
<b>Greenhouse</b>	\$200 per square foot	6 ft. by 10 ft.		
<b>Sunroom</b>	\$250 per square foot	6 ft. by 10 ft.		
<b>LANDSCAPE ACCESSORIES</b>				
<b>Garden Arbor</b>	\$20 per square foot			
<b>Hammock</b>	\$150	10 feet long		
<b>Outdoor Fountain</b>	\$1500 \$4000 \$1500 \$4000	6 ft. by 8 ft. 10 ft. by 13 ft. 7 ft. diameter circle 11 ft. diameter circle		
<b>Benches</b>	\$600 for 3 linear feet \$100 for each additional foot	2 feet wide		
<b>Picnic Table with Chairs</b>	\$1000 for 5 feet \$100 for each additional foot	3 feet wide		
<b>Low-Voltage Lighting</b>	\$2500 for first 4 lights \$750 for additional 4 lights			
<b>Gazebo</b>	\$4000 +\$1000	Circle or Octagon 8 foot diameter +2 foot diameter		
<b>ADDITIONAL ITEMS</b>				
<b>***** GRAND TOTAL OUTSIDE COST *****</b>				

**Porch:** A porch is a raised platform with a roof that that serves as a covered entrance to a house.

**Patio:** A patio is defined as an area, often paved, adjoining a house and used for lounging. Usually roofless.

**Deck:** A deck is defined as an open, uncovered porch extending from a building. Usually wooden. Usually elevated.

## BUYING A HOME - MORTGAGE CALCULATIONS

For all calculations on these pages, **round to the nearest dollar.**

**LOAN** – A lender, such as a bank, agree to lend the home buyer an amount equal to the difference between the down payment and the full purchase price of the home. The amount of the loan is called the **principal**. If the home costs \$300,000 and the buyer pays a 20% down payment of \$60,000, the principal is \$240,000.

### Home Loan Calculation

Final Price	Down Payment = 20% • Final price	Principal

**MORTGAGE TERM and APR** – The **term** is length of the loan. Longer mortgage terms have lower monthly payments. Shorter mortgage terms result in lower total costs. **APR** stands for Annual Percentage Rate. This refers to the amount of interest you must pay for borrowing money. For this project you will use a **fixed-rate mortgage**, meaning the rate will stay the same the entire time. Rates are currently low and we will use 4% as our standard interest rate.

### Mortgage Payment Calculation

Principal	Loan term	Multiply price by...	Monthly Mortgage Payment @ 4% APR
	15 yr.	0.0074	
	30 yr.	0.0048	

**INSURANCE** – Lenders typically require homeowners to purchase **homeowner's insurance**, which covers both the home and its contents in the event of a flood, fire, or other damage,

### Insurance Calculation

Final Price	Insurance Rate	Yearly Insur. = Price • Insur. Rate	Monthly Insurance
	0.006		

**PROPERTY TAXES** – You must pay annual **property taxes**. Property taxes can either be paid monthly as an addition to your mortgage or they can be paid yearly separate from your mortgage payment. For this project you will pay them as part of your monthly mortgage payment.  
 Southlake property taxes

### Property Tax Calculation

<b>Tax</b>	<b>Final Price</b>	<b>Tax Rate</b>	<b>Yearly Taxes = Price • Tax Rate</b>	<b>Monthly Tax</b>
City of Southlake		0.0046		
Tarrant County		0.00264		
Tarrant County College		0.001377		
Tarrant County Hospital		0.002279		
Carroll ISD		0.01415		
<b>Total</b>		<b>0.025046</b>		

**PITI** – The total monthly mortgage payment is often referred to as the **PITI**, which stands for principal, interest, taxes, and insurance.

### PITI Payment Calculation

<b>Monthly Mortgage (30 yr.)</b>	<b>Monthly Property Tax</b>	<b>Monthly Insurance</b>	<b>TOTAL (PITI)</b>

**INCOME NEEDED** – Banks use formulas to determine if a person qualifies for a loan based on their income. It is mostly based on family monthly income. Banks generally use the guideline of 30%. This means that the total cost of the monthly mortgage payment (**PITI**) should not exceed 30% of the family's monthly income.

### Total Yearly Income Estimate

<b>PITI Payment</b>	<b>Bank Rule of Thumb</b>	<b>Monthly Income = <math>\frac{\text{Monthly Cost}}{0.30}</math></b>	<b>Yearly Income Needed To Buy This House</b>
	Payment = 30% of income (Maximum)		

### Energy Efficiency Study

<b>Area of our house</b> (not including garage)	<b>Area of all windows</b>	<b>Window Percentage</b> $\frac{\text{Area of windows}}{\text{Area of house}} \cdot 100$ <i>(round to the nearest tenth)</i>	The area of the windows must be between 8% and 15% of the area of the house as this provides a balance between natural lighting and excessive energy consumption.

### Flooring Calculation

9 square feet = 1 square yard

<b>Total square footage</b> (not including garage):								
<b>Tile</b> (Bathrooms)			<b>Vinyl</b> (Kitchen)			<b>Carpet</b> (Rest of house, except garage)		
Square Feet	Unit Rate	Cost	Square Feet	Unit Rate	Cost	Square Yards	Unit Rate	Cost
	\$4.00 per ft. <sup>2</sup>			\$3.00 per ft. <sup>2</sup>			\$27.00 per yd. <sup>2</sup>	
Installation (\$5.00 per square foot):								
Total flooring cost (flooring + install):								

### Paint Calculation

<b>Area of all walls</b> (add together the perimeter of each room, then multiply by 10 [10 ft. walls])	<b>Area covered by a gallon of paint</b>	<b>Gallons of paint needed</b> (round up to the next whole gallon)	<b>Cost of Paint</b>	<b>Total Cost</b>
	300 ft. <sup>2</sup>		\$35 per gallon	

### Heating System Calculation

<b>Area of house</b> (not including garage)	<b>Average height of ceiling</b>	<b>Volume of house</b>
	10 ft.	

Volume of a house will determine the type of heating/air conditioning system that will be installed.