

Architect Rubric

R	1	2	3	4
Designs need extensive modifications to meet client requests	Designs meet a few of the clients requests but need some modifications	Designs meet some of the client requests and need minor modifications	Designs comply with the client requests (see checklist below)	Designs comply with the clients requests and are innovative
<p><i>Knowledge and Understanding</i></p> <p>Does not accurately calculate the volume and surface area of triangular prisms and cylinders</p> <p>Does not convert between metric units of measurement ($\text{cm}^2 - \text{m}^2/\text{cm}^3 - \text{m}^3/\text{cc} - \text{ml}$)</p>	<p><i>Knowledge and Understanding</i></p> <p>Calculates the volume and surface area of a limited number of triangular prisms and cylinders</p> <p>Converts between a limited number of metric units of measurement ($\text{cm}^2 - \text{m}^2/\text{cm}^3 - \text{m}^3/\text{cc} - \text{ml}$)</p>	<p><i>Knowledge and Understanding</i></p> <p>Calculates the volume and surface area of some triangular prisms and cylinders</p> <p>Converts between some metric units of measurement ($\text{cm}^2 - \text{m}^2/\text{cm}^3 - \text{m}^3/\text{cc} - \text{ml}$)</p>	<p><i>Knowledge and Understanding</i></p> <p>Accurately calculates the volume and surface area of triangular prisms and cylinders</p> <p>Converts between most metric units of measurement ($\text{cm}^2 - \text{m}^2/\text{cm}^3 - \text{m}^3/\text{cc} - \text{ml}$)</p>	<p><i>Knowledge and Understanding</i></p> <p>Accurately calculates the volume and surface area of triangular prisms, cylinders and half cylinders</p> <p>Converts between all metric units of measurement ($\text{cm}^2 - \text{m}^2/\text{cm}^3 - \text{m}^3/\text{cc} - \text{ml}$)</p>
<p><i>Thinking</i></p> <p>Does not devise a plan to complete the task.</p> <p>Rarely selects and uses appropriate tools to carry out the plan (online tools, conversion charts, building models, diagrams, math journal, anchor charts, manipulatives)</p> <p>Does not prove that the design satisfies the necessary criteria.</p>	<p><i>Thinking</i></p> <p>Devises a mediocre plan to complete the task.</p> <p>Selects and uses few appropriate tools to carry out the plan (online tools, conversion charts, building models, diagrams, math journal, anchor charts, manipulatives).</p> <p>Attempts to prove that the design satisfies some of the necessary criteria.</p>	<p><i>Thinking</i></p> <p>Devises a workable, but not sound, plan to complete the task.</p> <p>Selects and uses some appropriate tools to carry out the plan (online tools, conversion charts, building models, diagrams, math journal, anchor charts, manipulatives).</p> <p>Proves that some of the design satisfies the necessary criteria.</p>	<p><i>Thinking</i></p> <p>Interprets the task and devises a sound plan to complete the task.</p> <p>Selects and uses appropriate tools to carry out the plan (online tools, conversion charts, building models, diagrams, math journal, anchor charts, manipulatives) effectively.</p> <p>Mathematically proves that the design satisfies the necessary criteria in their reflection.</p>	<p><i>Thinking</i></p> <p>Interprets the task and devises a systematic plan to complete the task.</p> <p>Selects and uses appropriate tools to carry out the plan (online tools, conversion charts, building models, diagrams, math journal, anchor charts, manipulatives) with a high degree of effectiveness.</p> <p>Mathematically proves that the design satisfies the necessary criteria in a very organized manner.</p>

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<p>Communication</p> <p>Communicate with their partners was not effective.</p> <p>Asks no specific questions to clarify mathematical understanding.</p> <p>Communication is not clear in the following ways: words (virtual discussions), pictures/diagrams (blueprint), numbers and symbols (calculation sheets/blueprint), using 3D models</p>	<p>Communication</p> <p>Communicate with their partners, using a limited range of mathematical language and conventions, to create their blueprint and model.</p> <p>Asks few questions to clarify mathematical understanding.</p> <p>Communicates effectively in a few ways: words (virtual discussions), pictures/diagrams (blueprint), numbers and symbols (calculation sheets/blueprint), using 3D models</p>	<p>Communication</p> <p>Communicate with their partners, using some mathematical language and conventions, to create their blueprint and model.</p> <p>Asks some questions to clarify mathematical understanding.</p> <p>Communicates effectively in some ways: words (virtual discussions), pictures/diagrams (blueprint), numbers and symbols (calculation sheets/blueprint), using 3D models</p>	<p>Communication</p> <p>Effectively communicate with their partners, using mathematical language and conventions, to create their blueprint and model.</p> <p>Asks clear questions to clarify mathematical understanding.</p> <p>Communicates effectively in a variety of ways: words (virtual discussions), pictures/diagrams (blueprint), numbers and symbols (calculation sheets/blueprint), using 3D models</p>	<p>Communication</p> <p>Effectively communicate with their partners, using precise mathematical language and conventions, to create their blueprint and model.</p> <p>Asks well crafted questions to further mathematical understanding.</p> <p>Communicates effectively in the following ways: words (virtual discussions), pictures/diagrams (blueprint), numbers and symbols (calculation sheets/blueprint), using 3D models</p>
<p>Application</p> <p>Does not transfer knowledge and skills to a new context (meeting house requirements).</p>	<p>Application</p> <p>Transfers knowledge and skills to a new context (meeting house requirements) with limited effectiveness.</p>	<p>Application</p> <p>Transfers knowledge and skills to a new context (meeting house requirements) with some effectiveness.</p>	<p>Application</p> <p>Transfers knowledge and skills to a new context (meeting house requirements) effectively.</p>	<p>Application</p> <p>Transfers knowledge and skills to a new context (meeting house requirements) with a high degree of effectiveness.</p>

Client Requests:

The home/property must...

- cover no more than 15% of an acre
- be two stories in height with a gabled roof
- have detached garage
- have 2 entrances/exits
- have a kitchen, dining room, living room, 4 bedrooms and 2 bathrooms
- have ceilings 300cm in height
- have a living room greater than 20m² to accommodate a 12’x18’ Persian Rug
- must have a front closet no smaller than 6 250 000 cm³
- have a Quonset hut in the backyard for storage (a frontage of 6m and a total volume no greater than 241.5m³)
- have a circular pool with a volume of water approximately 30 m³