

✔ Congratulations! You passed!

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To pass 80% or  
higher

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1. Based on the information provided in the Final Graded Quiz Specs reading, if we use 327 WDC (0.327 kW) PV panels, how many of them will you need? Round up to the nearest whole number.

2 / 2 points

16

✔ Correct

Correct!

$$5750 \text{ kWh} / (1496 \times 0.75) = 5.12 \text{ kW}$$

$$5.12 \text{ kW} / 0.327 \text{ kW per panel} = 15.67 \text{ panels}$$

Round up to 16 panels (modules).

2. The roof size is 30 feet long by 15 feet up-slope. Each solar panel is 42" x 62" in size.

2 / 2 points

Using your answer from Question 1, will all of the panels fit here in portrait? Does this leave at least 18" at the peak? The image below shows as example of portrait mounting, but does not reflect the module configuration you would use.



- ☒ Yes, they will all fit, and yes, it leaves a minimum of 18" at the peak.
- ☐ No, they will not all fit.
- ☐ Yes, they will all fit, but it does not leave a minimum of 18" at the peak.

✔ Correct

Correct! See if your calculations match the following:

$$30 / (42 / 12) = 8.57 \text{ i.e. } 8$$

$$15 / (62 / 12) = 2.9 \text{ i.e. } 2$$

$$15 \times 12 - (2 \times 62) = 56" \text{ YES, } > 18"$$

3. Using your answer from Question 1, if the cost is \$3.25 per Watt, what does the whole system cost?

2 / 2 points

17004

✔ Correct

Correct!

$$\text{With 16 panels: } 16 \times 327 \text{ W} = 5232 \text{ W}$$

$$5232 \times 3.25 \text{ per W} = \$17,004$$

4. The New York solar grant is \$0.35/Watt. Using your prior answers, what is the total grant the customer will receive? Round your answer to the nearest dollar.

2 / 2 points

1831

✔ Correct

Correct!

$$16 \times 327 \times 0.35 = \$1831.20$$

5. The Federal tax credit is 26% of the (after-New York grant) system cost. Using your previous responses, how much is the Federal tax credit? Round up to the nearest dollar.

2 / 2 points

3945

✔ Correct

Correct!

$$\$17,004 - 1831.20 = \$15,172.80$$

$$0.26 \times 15172.8 = \$3,944.93$$