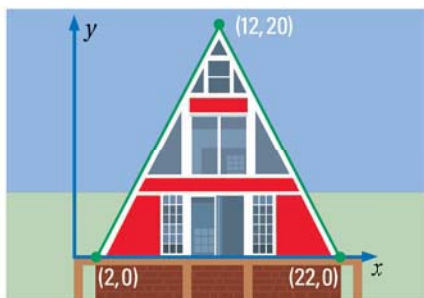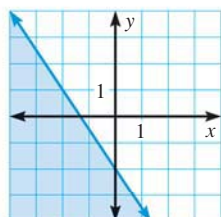## Lessons 2.5–2.8

MULTIPLE CHOICE

1. ARCHITECTURE An "A-frame" house is shown below. The coordinates x and y are both measured in feet. Which absolute value function models the front of the house? *TEKS 2A.4.B*


Ⓐ $y = -2|x - 12|$

Ⓑ $y = 2|x| + 20$

Ⓒ $y = -2|x - 12| + 20$

Ⓓ $y = 2|x - 12| - 20$

2. LINEAR INEQUALITIES The graph of which inequality is shown? *TEKS a.5*

Ⓕ $-x + y \geq 2$

Ⓖ $3x + 2y \leq -4$

Ⓗ $4x + 3y \geq -10$

Ⓙ $9x + 4y \leq -24$

3. INTERNET COST The cost of an Internet service subscription varies directly with the length of the subscription. A 3 month subscription costs $32.85. How much does a 12 month subscription cost? *TEKS 2A.10.G*

Ⓐ $32.85 Ⓑ $36

Ⓒ $131.40 Ⓓ $133.33

4. SUNSPOTS Based on the data in the graph, which conclusion is most accurate? *TEKS 2A.1.B*
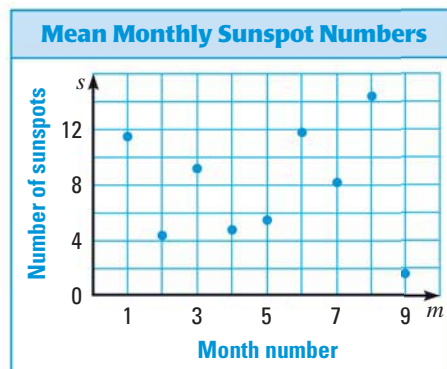
Ⓕ The sunspot data show a positive correlation.

Ⓖ The sunspot data show a negative correlation.

Ⓗ The sunspot data show approximately no correlation.

Ⓙ The sunspot data show a strong correlation.

5. FLOWER SALES A plant nursery sells marigolds for $2 per pack and zinnias for $3 per pack. You have a total of $30 to spend. Which inequality describes the numbers of packs of marigolds m and zinnias z you can buy? *TEKS a.3*

Ⓐ $2m - 3z \leq 30$

Ⓑ $2m + 3z \leq 30$

Ⓒ $3m - 2z \geq 30$

Ⓓ $3m + 2z \geq 30$

GRIDDED ANSWER ⓪①●③④⑤⑥⑦⑧⑨

6. FUNDRAISERS You are selling sandwiches and juices to raise money for a class field trip. Your daily sales s (in dollars) increase for the first several days and then decrease as given by the function $s(t) = -15|t - 5| + 180$ where t is the time (in days). What is the maximum amount of money you raised in one day? *TEKS a.5*