MIXED REVIEW FOR TEKS

TAKS PRACTICE
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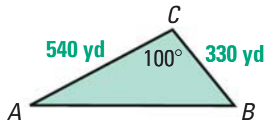
Lessons 13.4–13.6

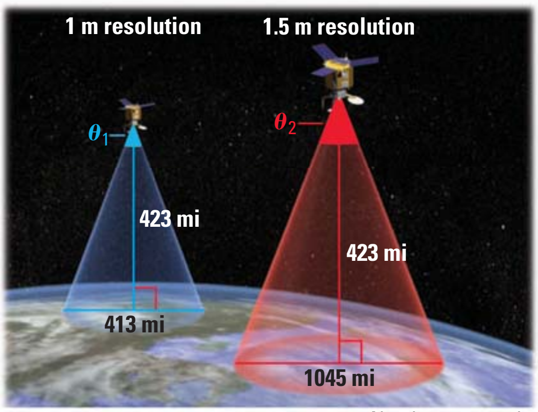
MULTIPLE CHOICE

1. **AREA OF A PROPERTY** You are buying the triangular piece of property shown. What is the approximate length of the third side? ***TEKS a.4***



Ⓐ 210 yards Ⓑ 427 yards
Ⓒ 633 yards Ⓓ 680 yards

2. **SATELLITE IMAGING** The IKONOS satellite takes images of Earth's surface from a height of about 423 miles. The largest region IKONOS can view is about 1045 miles across. IKONOS can take photographs that show objects 1 meter across provided the objects lie within a region 413 miles across. What is the approximate angle IKONOS rotates as it pans across a region this size? ***TEKS a.1***



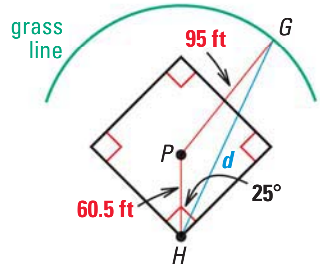
Not drawn to scale

Ⓕ 26.0° Ⓖ 44.3°
Ⓗ 52.0° Ⓙ 64.0°

3. **CONSTRUCTION** You want to build a triangular concrete patio that has sides of length 8 feet, 11 feet, and 15 feet, and a thickness of 0.5 foot. One bag of cement makes 0.33 cubic foot of concrete. How many bags of cement do you need to make the patio? ***TEKS a.1***

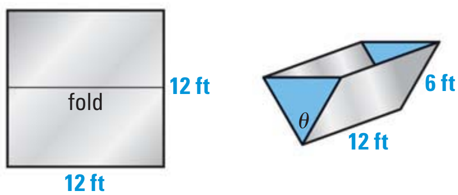
Ⓐ 65 bags Ⓑ 79 bags
Ⓒ 109 bags Ⓓ 130 bags

4. **THROWING DISTANCE** On a baseball field, the pitcher's mound at P is 60.5 feet from home plate at H and 95 feet from an arc where the outfield grass begins. A ball is hit 25° to the right of the pitcher's mound and travels to the edge of the grass. What approximate distance d must an outfielder throw the ball to make an out at home plate? ***TEKS a.4***



Ⓕ 47.6 feet Ⓖ 112.6 feet
Ⓗ 131.4 feet Ⓙ 146.3 feet

5. **MAXIMUM VOLUME** A trough can be made by folding a rectangular piece of metal in half and then enclosing the ends. The volume of water the trough can hold depends on how far you bend the metal. Use a graphing calculator to estimate the maximum volume of the trough. (*Hint:* First find the volume of the trough as a function of θ.) ***TEKS a.1***



Ⓐ 54 ft^3 Ⓑ 72 ft^3
Ⓒ 216 ft^3 Ⓓ 218 ft^3

GRIDDED ANSWER

6. **BEACH SLOPE** After walking 20 feet into the water at a beach, you notice that the depth of the water is 3 feet. Find the angle θ at which the beach slopes. Round your answer to the nearest tenth of a degree. ***TEKS a.4***