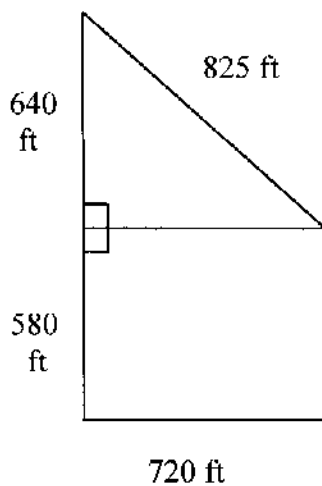


Agriculture
Perimeter & Area Quiz

Name Key

1. A farmer wants to fence a field for pasture. Barbed wire fencing costs \$1.48 per foot and woven wire fencing costs \$1.93 per foot. Determine how much it would cost to fence the pasture with barbed wire and also with woven wire fencing. The farmer wants to avoid overgrazing the pasture and plans to graze 1 horse for every 4 acres of land. How many horses should the farmer put in the pasture?



$$P = 640 + 580 + 720 + 580 + 825 = 3345 \text{ ft}$$

$$\text{Barbed Wire} = 3345 \times \$1.48 = \$4950.60$$

$$\text{Woven Wire} = 3345 \times \$1.93 = \$6455.85$$

$$A_{\Delta} = \frac{1}{2}bh$$

$$A_{\square} = lw$$

$$A = A_{\Delta} + A_{\square}$$

$$A_{\Delta} = \frac{1}{2}(720)(640)$$

$$A_{\square} = 720(580)$$

$$A = 230400 + 417600$$

$$A_{\Delta} = 230400$$

$$A_{\square} = 417600$$

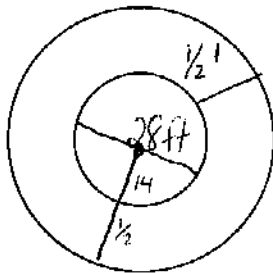
$$A = 648000 \text{ ft}^2$$

$$648000 \text{ ft}^2 \cdot \frac{1 \text{ acre}}{43560 \text{ ft}^2} = 14.9 \text{ acres}$$

$$14.9 \text{ acres} \cdot \frac{1 \text{ horse}}{4 \text{ acres}} = 3.7$$

3 Horses

2. You want to place a cylindrical grain bin on a concrete pad. The diameter of the grain bin is 28 feet. $r = 14 \text{ ft}$. You want 1/2 foot of concrete around the outside of the bin. What is the area of concrete not covered by the grain bin?



$$A_{\text{bin}} = \pi r^2$$

$$A_{\text{concrete}} = \pi r^2$$

$$A_{\text{bin}} = \pi 14^2$$

$$A_{\text{concrete}} = \pi (14\frac{1}{2})^2$$

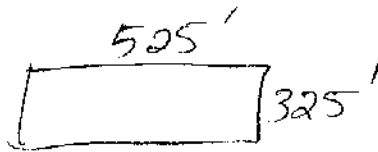
$$A_{\text{bin}} = 615.8 \text{ ft}^2$$

$$A_{\text{concrete}} = 660.5 \text{ ft}^2$$

$$A_{\text{concrete}} = 660.5 - 615.8$$

$$A_{\text{concrete}} = 44.7 \text{ ft}^2$$

3. You have a field 525 feet long and 325 feet wide planted in strawberries. How many acres of strawberries are there?



$$A = lw$$

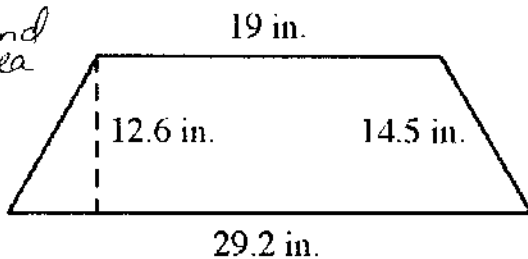
$$A = 525(325)$$

$$A = 170625 \text{ ft}^2$$

$$170625 \text{ ft}^2 \cdot \frac{1 \text{ acre}}{43560 \text{ ft}^2}$$

$$3.9 \text{ acres}$$

4. Find area

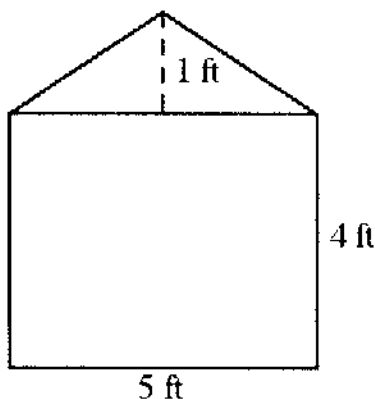


$$A = \frac{1}{2}(b_1 + b_2)h$$

$$A = \frac{1}{2}(19 + 29.2)(12.6)$$

$$A = 303.7 \text{ in}^2$$

5. The diagram shows the dimensions of the front of a storage building. What is the area of the entire front of the building?



$$A_{\Delta} = \frac{1}{2}bh$$

$$A_{\Delta} = \frac{1}{2}(5)(1)$$

$$A_{\Delta} = 2.5 \text{ ft}^2$$

$$A_{\square} = lw$$

$$A_{\square} = 5(4)$$

$$A_{\square} = 20 \text{ ft}^2$$

$$A = A_{\Delta} + A_{\square}$$

$$A = 2.5 + 20$$

$$A = 22.5 \text{ ft}^2$$