

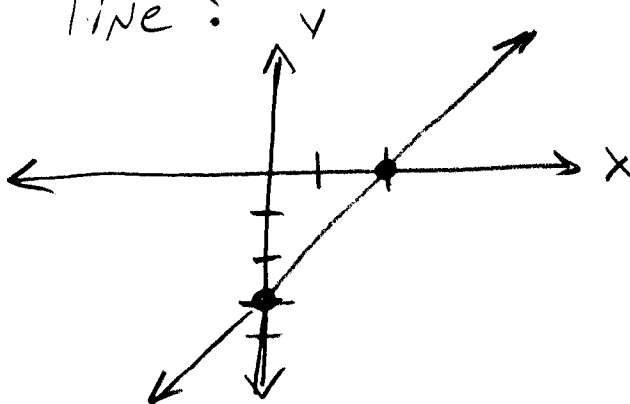
Geometry 1-8E WEDNESDAY 2-23-12

ACT
PRACTICE

① Simplify $\frac{(x-5)^2}{x^2-25}$

$x^2 \neq 25$

② WHAT IS THE EQUATION OF THE LINE?

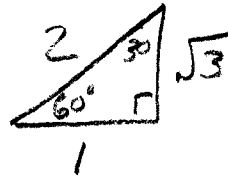
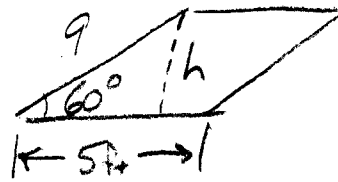


③ The perimeter of a parallelogram is 64 inches and one side is 10 inches. What are the lengths of the other 2 sides?

Geo. I Homework Reviews Pg 598 #3-5, 15-17

Parallelograms, P, A to nearest tenth

③



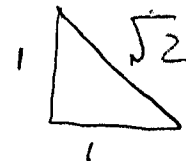
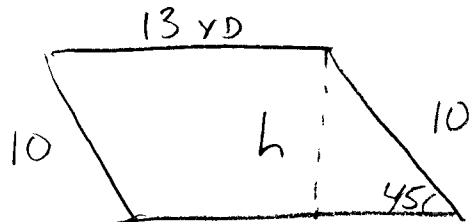
$$\frac{2}{\sqrt{3}} = \frac{9}{h} \quad \therefore 2h = 9\sqrt{3}$$
$$h = \frac{9}{2}\sqrt{3}$$

$$\therefore A = 5 \cdot \frac{9}{2}\sqrt{3} = \frac{45}{2}\sqrt{3} \approx \frac{45}{2}(1.732)$$

$$A \approx 38.97 \approx \boxed{39.0 \text{ ft}^2} \text{ Area}$$

$$P = 2(9) + 2(5) = \boxed{28 \text{ ft}} \text{ Perimeter}$$

④



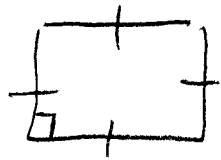
$$h = \frac{10}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{10\sqrt{2}}{2} = 5\sqrt{2}$$

$$A = (13)(5\sqrt{2}) = 65\sqrt{2}$$

$$A \approx 65(1.414) \approx 91.91 \approx \boxed{91.9 \text{ yd}^2} \text{ Area}$$

$$P = 2(13) + 2(10) = \boxed{46 \text{ yd}} \text{ Perimeter}$$

5



3.2 m

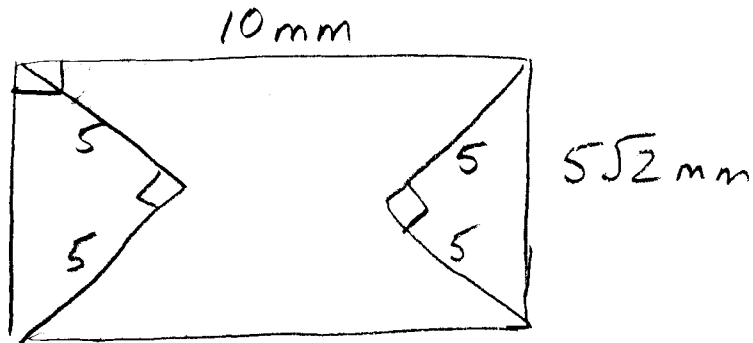
$$A = (3.2)(3.2)$$

$$A = 10.24 \text{ m}^2 \text{ Area}$$

$$\begin{array}{r} 32 \\ 32 \\ \hline 64 \\ 96 \\ \hline 1024 \end{array}$$

$$P = 4(3.2) = 12.8 \text{ m Perimeter}$$

15



$$A_{\square} = 10(5\sqrt{2}) = 50\sqrt{2} \text{ mm}^2$$

$$A_{\Delta} = \frac{1}{2}(5)(5) = \frac{25}{2} \text{ mm}^2$$

$$2\Delta \Rightarrow 25 \text{ mm}^2$$

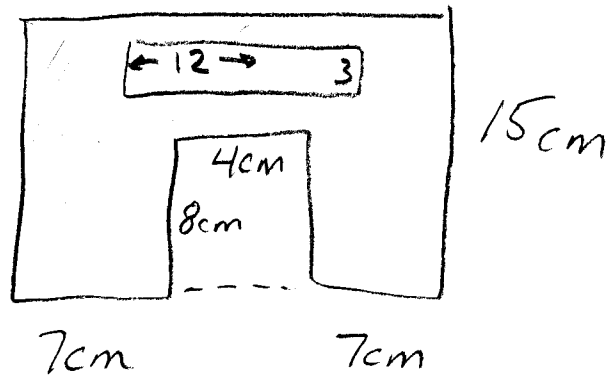
$$A_{\text{SHADED}} = 50\sqrt{2} - 25 \text{ mm}^2$$

$$\approx 50(1.414) - 25$$

$$\approx 70.71 - 25$$

$$\approx 45.7 \text{ mm}^2 \text{ Area Shaded}$$

16



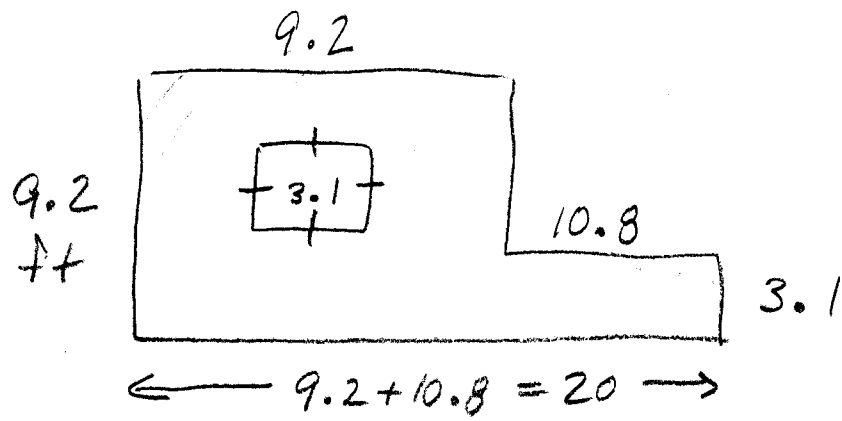
$$A_{\square} = 7(15) \text{ cm}^2 = 105 \text{ cm}^2$$

$$A_{\square \text{ CUTOUT}} = 4(8) = 32 \text{ cm}^2$$

$$A_{\text{CUTOUT}} = 12(3) = 36 \text{ cm}^2$$

$$\begin{aligned} A_{\text{SHAPE}} &= 105 - 32 - 36 \text{ cm}^2 \\ &= \boxed{37 \text{ cm}^2} \end{aligned}$$

(17)



$$A_{\square} = 9.2(20) = 184 \text{ ft}^2$$

$$\begin{aligned} A_{\square \text{ CUTOUT}} &= 3.1(3.1) \\ &= 9.61 \text{ ft}^2 \end{aligned}$$

$$\begin{array}{r} 3.1 \\ 3.1 \\ \hline 31 \\ 93 \\ \hline 9.61 \end{array}$$

$$\begin{aligned} A_{\square \text{ CUTOUT}} &= 10.8(9.2 - 3.1) \\ &= 10.8(6.1) \\ &= 65.88 \text{ ft}^2 \end{aligned}$$

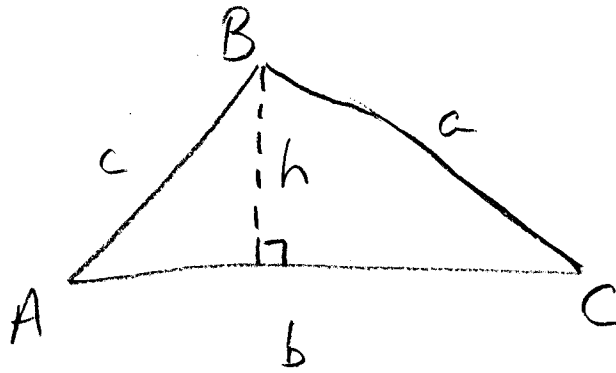
∴

$$A_{\text{SHADED}} = 184 - 9.61 - 65.88$$

$$\cong 108.51$$

$$\cong \boxed{108.5 \text{ ft}^2}$$

Recall - Area of Triangle



$$\text{Area} = \frac{1}{2} \overline{AC} h$$

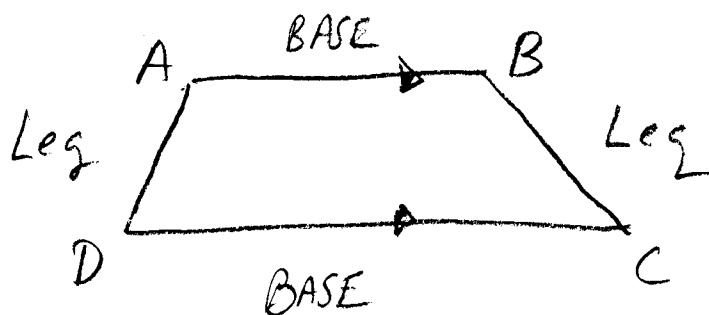
↓
base

or $\text{Area} = \frac{1}{2} cb \sin A$

3 different combinations
for each Δ .

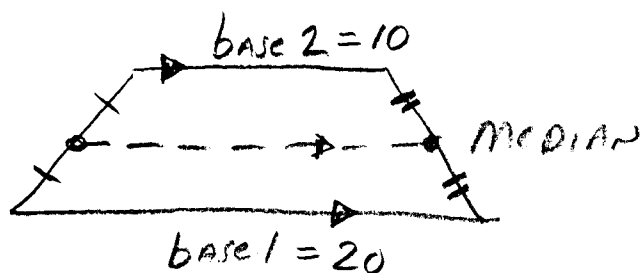
Ch. 11-2 AREAS OF TRAPEZOIDS, TRIANGLES

trapezoid: A quadrilateral with ONE pair of parallel sides



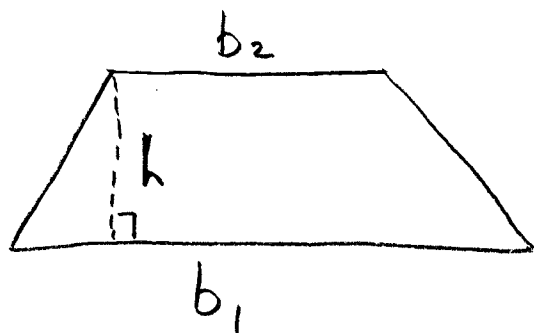
$\angle D$ and $\angle C$ are base angles
 if $\angle D \cong \angle C \Rightarrow$ isosceles trapezoid

Theorem 8.20 The median of a trapezoid is parallel to the bases and its measure = $\frac{1}{2}(b_1 + b_2)$



$$\text{Median} = \frac{1}{2}(10 + 20) = 15$$

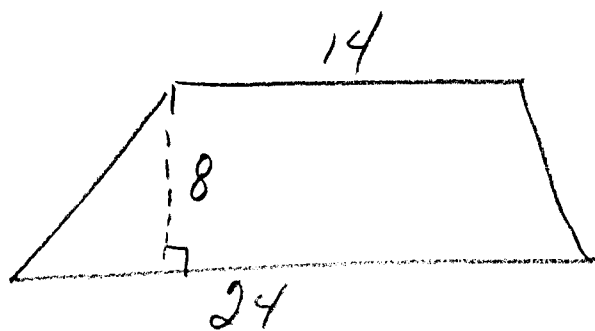
Area of Trapezoid



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

(Avg. of bases) (height)

(Ex) Find Area



$$A = \frac{1}{2} (24 + 14) 8$$

$$= \frac{1}{2} (38) 8$$

$$= 19(8) = 152 \text{ sq. units.}$$