* copied formulas down in formula booklet

Day 62

10.1 and 10.2 Area

Areas of Parallelograms and Triangles Areas of Trapezoids, Rhombuses, and Kites

To Find Perimeter: add up all sides (distance around)

Find the area of each triangle, given the base b and the height h.

1. $b = 4, h = 4$

$A = \frac{1}{2}(4)(4)$

$A = 8 \text{ un}^2$

2. $b = 3\frac{1}{4}, h = \frac{1}{2}$

$A = \frac{1}{2}\left(3\frac{1}{4}\right)\left(\frac{1}{2}\right)$

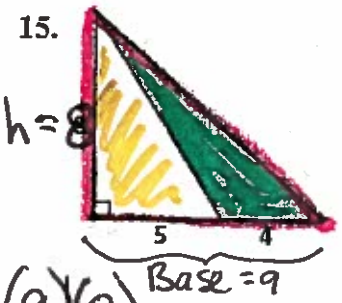
$A = \frac{13}{16} \text{ un}^2$

3. $b = 100, h = 30$

Find the area of the shaded region.

Area Shaded = Area Big Δ − Area Small Δ

15.



$A = \frac{1}{2}(9)(8)$

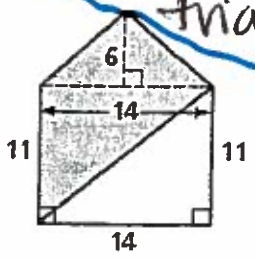
$A = 36$

$A = \frac{1}{2}(5)(8)$

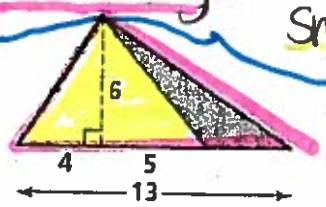
$A = 20$

$A = 36 - 20 = 16 \text{ un}^2$

16.



17.



triangle

$\frac{1}{2}(13)(6) - \frac{1}{2}(9)(6)$

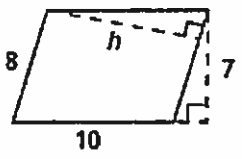
B · H B · H

$39 - 27$

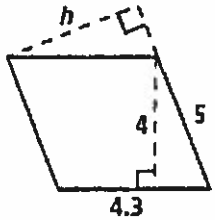
$A = 12$

Find the value of h in each parallelogram.

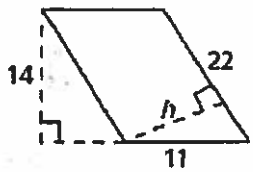
10.



11.



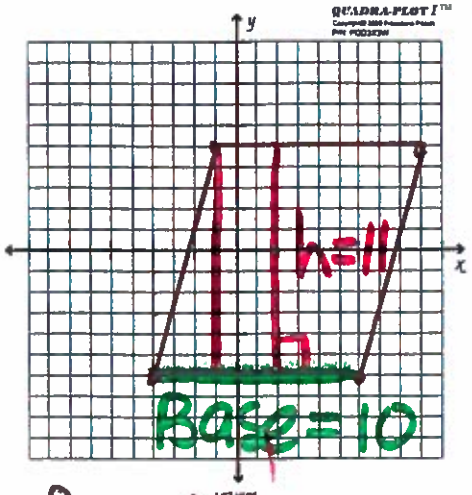
12.



1st: Plot points, identify shape.

13. What is the area of $\square ABCD$ with vertices $A(-4, -6)$, $B(6, -6)$, $C(-1, 5)$, and $D(9, 5)$?

14. What is the area of $\triangle DEF$ with vertices $D(-1, -5)$, $E(4, -5)$, and $F(4, 7)$?

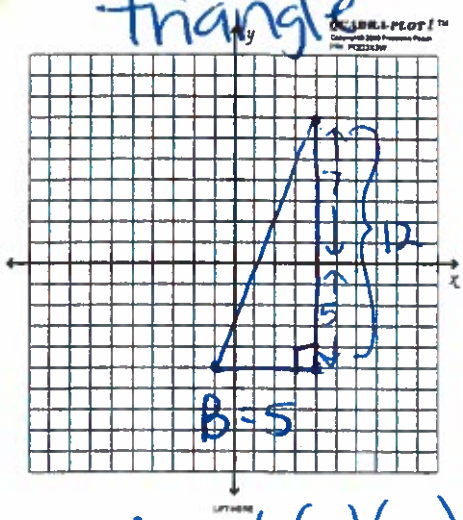


Parallelogram

$A = B \cdot H$

$A = 10 \cdot 11 = 110 un^2$

triangle

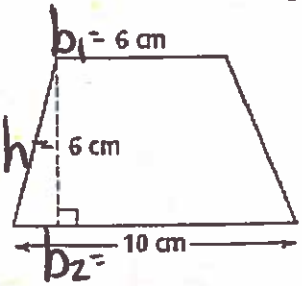


$A = \frac{1}{2}(5)(12)$

$A = 30 un^2$

Find the area of each trapezoid.

1.

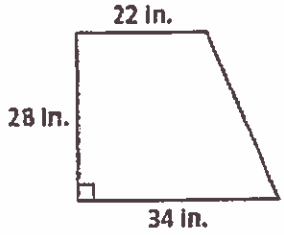


$A = \frac{1}{2} \cdot 6(6+10)$

$A = 3(16)$

$A = 48 cm^2$

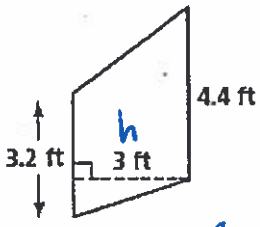
2.



$A = \frac{1}{2}(28)(22+34)$

$A = 784 in^2$

3.



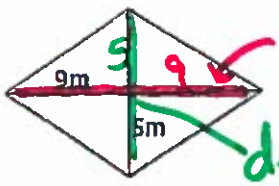
$A = \frac{1}{2}(3)(3.2+4.4)$

$A = 11.4 ft^2$

Find the area of each rhombus.

Pythagorean Triple: 30, 40, 50

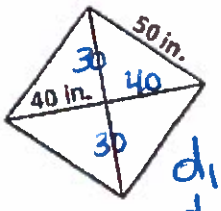
4.



$\frac{1}{2} \cdot d_1 \cdot d_2$

$\frac{1}{2} \cdot 18 \cdot 10 = 90 m^2$

5.

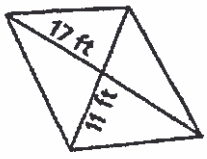


$d_1 = 80 in$

$d_2 = 60 in$

$\frac{1}{2}(80)(60) = 2400 in^2$

6.



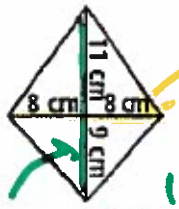
Kite and rhombus

$A = \frac{1}{2}$ diagonal 1 · diagonal 2

$A = \frac{1}{2} d_1 \cdot d_2$

Find the area of each kite.

7.



$d_1 = 16$

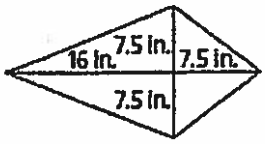
$11+9$

$d_2 = 20$

$\frac{1}{2} \cdot 16 \cdot 20$

$160 cm^2$

8.



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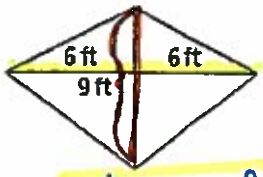


$d_1 = 12$ ft

$d_2 = 9$ ft

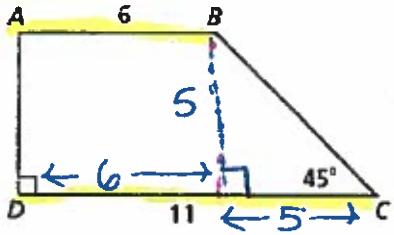
$A = \frac{1}{2}(12)(9)$

$A = 54 ft^2$

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

Find the area of each trapezoid. Leave your answers in simplest radical form.

10.

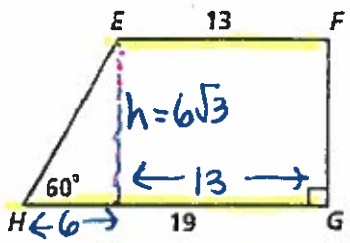


$A = \frac{1}{2}(5)(6+11)$

$A = \frac{1}{2}(5)(17)$

$A = 42.5 un^2$

11.

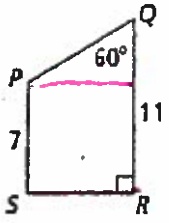


$A = \frac{1}{2}(6\sqrt{3})(13+19)$

$A = 3\sqrt{3}(32)$

$A = 96\sqrt{3} un^2$

12.

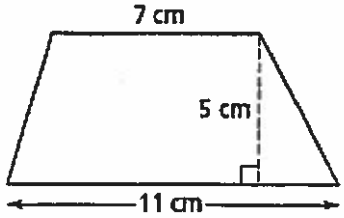


h = height of the trapezoid

Bases are the parallel sides

Find the area of each trapezoid to the nearest tenth.

13.



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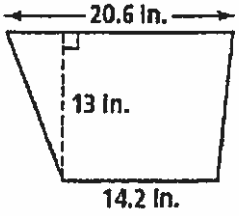

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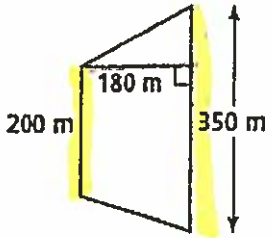
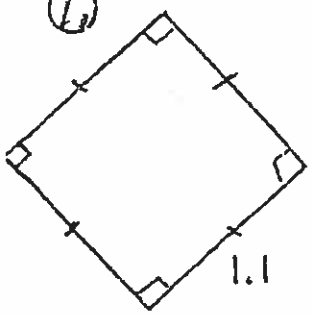


$A = \frac{1}{2} \cdot 180(200+350)$

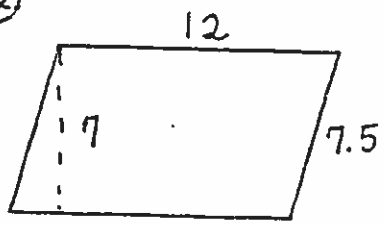
$A = 49500 m^2$

10.2 Find the AREA of the following figures. Name: _____

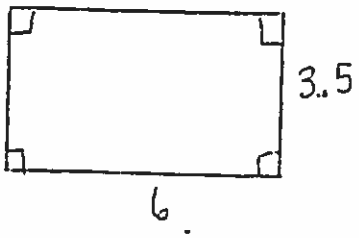
1.



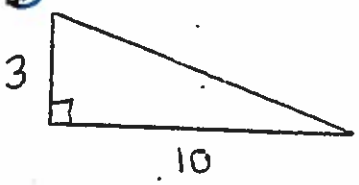
2.



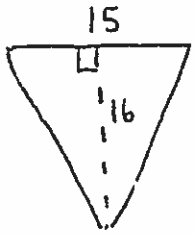
3.



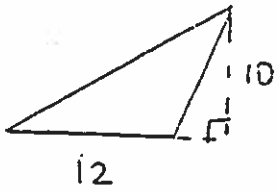
4



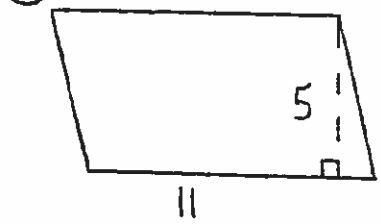
5.



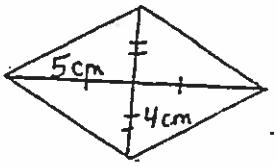
6.



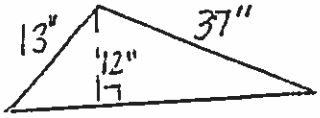
5



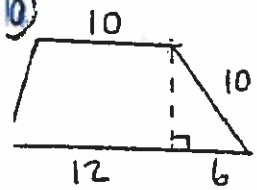
8.



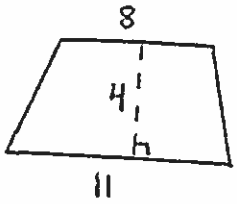
9.



10



11.



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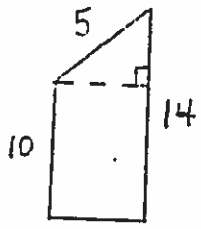
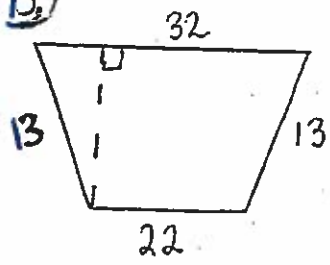


13.



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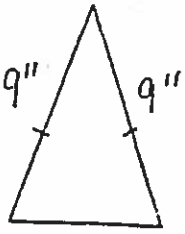

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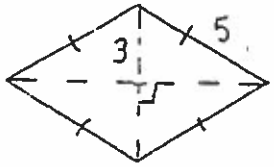
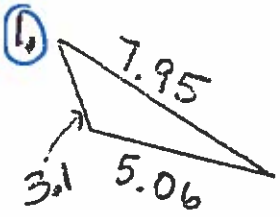
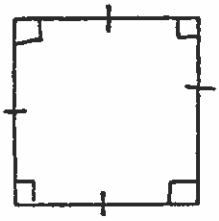
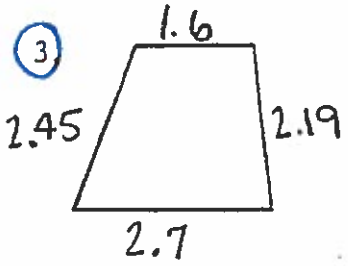


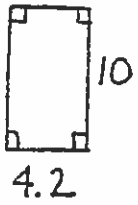
PRE-ALGEBRA 10.1 NAME _____ PERIOD ____

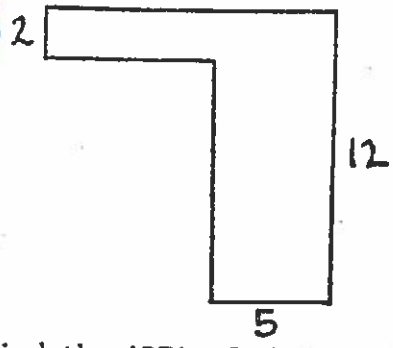
Find the PERIMETER of the following figures.

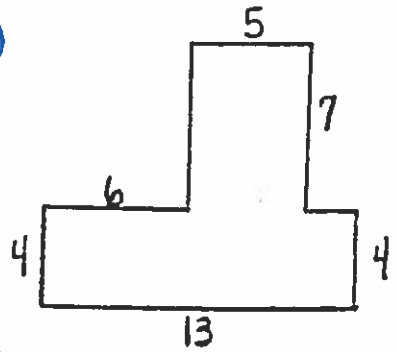
1. 

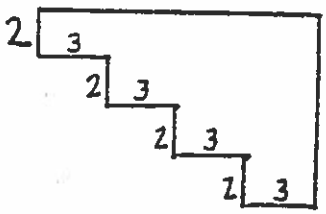
2. 

3. 

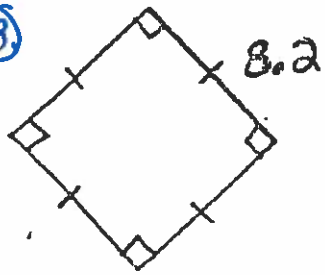
4. 

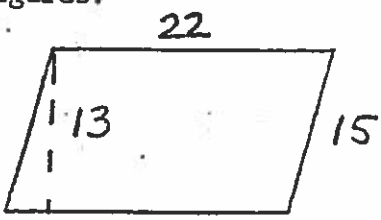
5. 

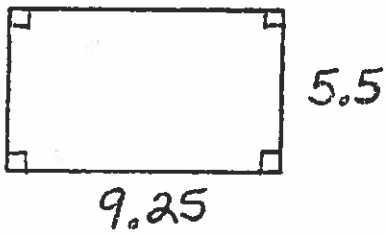
6. 

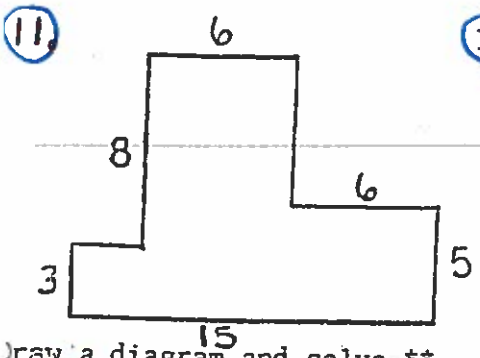
7. 

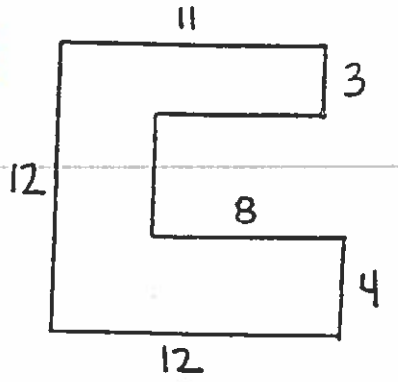
Find the AREA of the following figures.

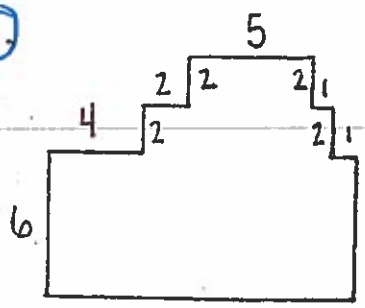
8. 

9. 

10. 

11. 

12. 

13. 

Draw a diagram and solve.**

14. If a square has an area equal to 36 cm², find its perimeter.

15. If a rectangle has a perimeter of 50 yards and its length is 18 yards, find its area.