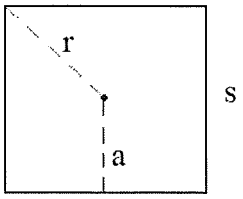
Name: _____

Geometry In-Class Practice

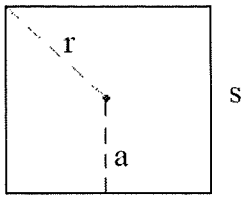
Area of Squares Given Side length (s), Radius (r), Apothem (a) and/or perimeter(p).

Directions: Find the exact area of the square. Circle your final answer.

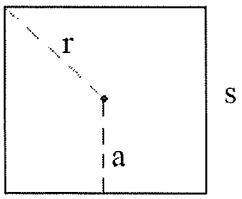
1. s = 16m



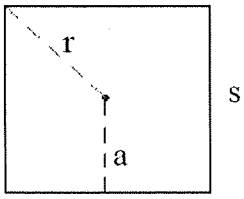
2. s = 18in



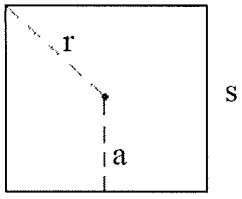
3. p = 16m



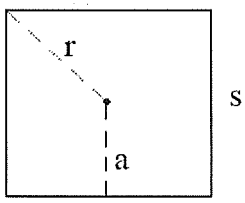
4. p = 88in



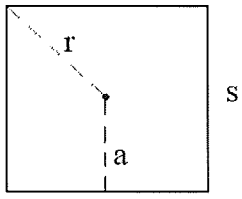
5. a = 15m



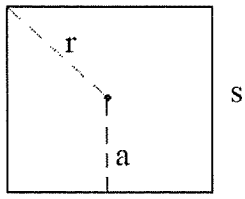
6. a = 20in



7. r = 18m



8. r = 12 in

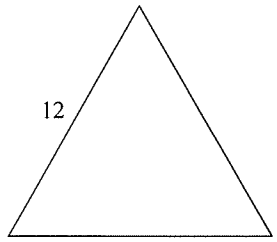


Geometry- In Class Practice Name_____ ID: 1

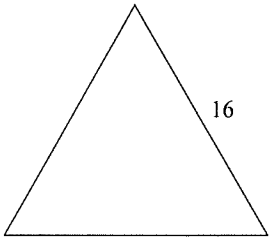
Area of Equilateral Triangles and Regular Hexagons Date_____ Period____

Find the area of each regular polygon. Leave your answer in simplest form.

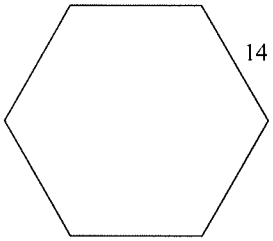
1)



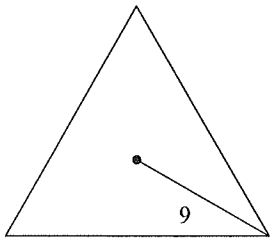
2)



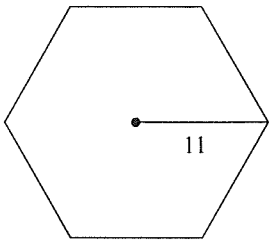
3)



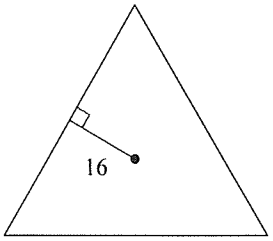
4)



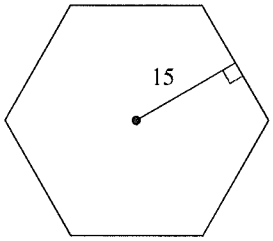
5)



6)



7)



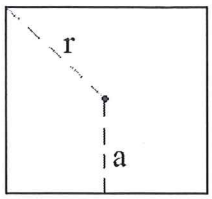
Name: Key

Geometry In-Class Practice

Area of Squares Given Side length (s), Radius (r), Apothem (a) and/or perimeter(p).

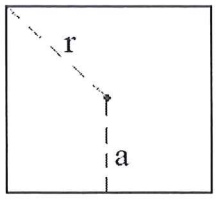
Directions: Find the exact area of the square. Circle your final answer.

1. s = 16m



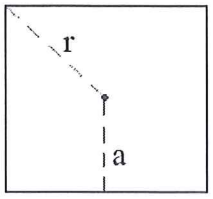
$A = S \cdot S$
$A = 16 \cdot 16$
$A = 256m^2$

2. s = 18in



$A = 18 \cdot 18$
$A = 324in^2$

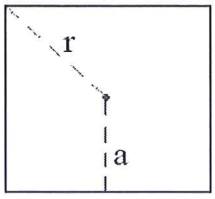
3. p = 16m



① Find S
$\frac{16}{4 \text{ sides}} = S$ $S = 4m$

② $A = 4 \cdot 4$
$A = 16m^2$

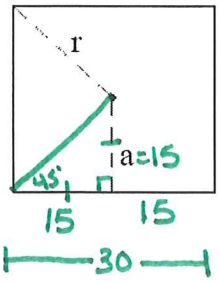
4. p = 88in



① Find S
$\frac{88}{4} = S$ $S = 22in$

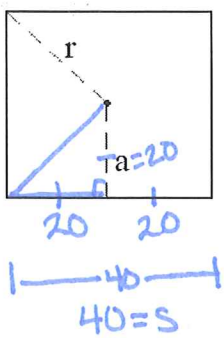
② $A = 22 \cdot 22$
$A = 484in^2$

5. a = 15m



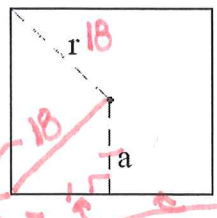
$S = 30m$
$A = 30 \cdot 30$
$A = 900m^2$

6. a = 20in



$A = 40 \cdot 40$
$A = 1600in^2$

7. r = 18m

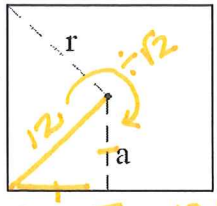


$S = 2(9\sqrt{2})$
$S = 18\sqrt{2}\,m$
$A = 18\sqrt{2} \cdot 18\sqrt{2}$
$A = 324 \cdot \sqrt{4} = 324 \cdot 2$
$A = 648m^2$

$\cdot\sqrt{2}$

$a = \frac{18}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{18\sqrt{2}}{\sqrt{4}} = \frac{18\sqrt{2}}{2} = 9\sqrt{2}$

8. r = 12 in



$\cdot\sqrt{2}$

$\frac{12}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}} = \frac{12\sqrt{2}}{\sqrt{4}}$

$\frac{12\sqrt{2}}{2} = 6\sqrt{2}$

$s = 12\sqrt{2}$

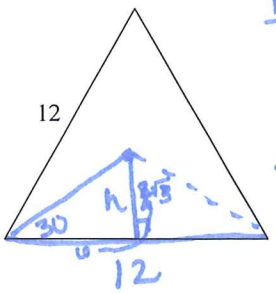
$A = 12\sqrt{2} \cdot 12\sqrt{2}$
$A = 144 \cdot \sqrt{4}$
$A = 144 \cdot 2$
$A = 288in^2$

Geometry- In Class Practice Name Key ID: 1

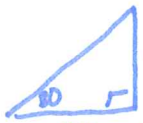
Area of Equilateral Triangles and Regular Hexagons Date _____ Period ____

Find the area of each regular polygon. Leave your answer in simplest form.

1)



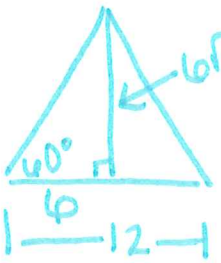
method 1 3



$A=3\cdot\frac{1}{2}\cdot 12\cdot 2\sqrt{3}$

$\boxed{A=36\sqrt{3}}$

method 2

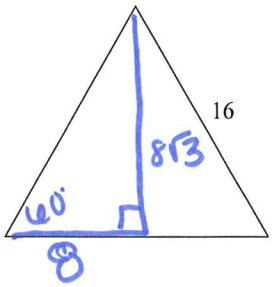


$A=\frac{1}{2}b\cdot h$

$A=\frac{1}{2}\cdot 12\cdot 6\sqrt{3}$

$\boxed{A=36\sqrt{3}}$

2)



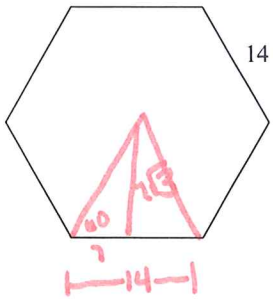
method 2 (1 Δ)

$A=\frac{1}{2}b\cdot h$

$A=\frac{1}{2}\cdot 16\cdot 8\sqrt{3}$

$\boxed{A=64\sqrt{3}}$

3)



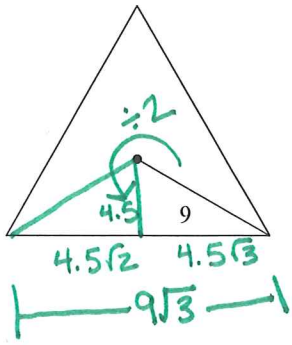
$A=6$

$A=6\left(\frac{1}{2}b\cdot h\right)$

$A=6\left(\frac{1}{2}\cdot 14\cdot 7\sqrt{3}\right)$

$\boxed{A=294\sqrt{3}}$

4)



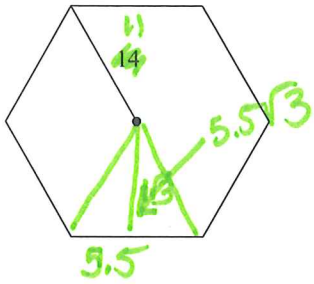
3

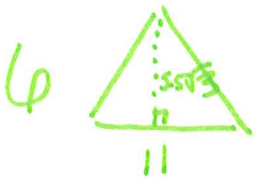
$A=3\left(\frac{1}{2}b\cdot h\right)$

$A=3\left(\frac{1}{2}\cdot 9\sqrt{3}\cdot 4.5\right)$

$\boxed{A=60.75\sqrt{3}}$

5)

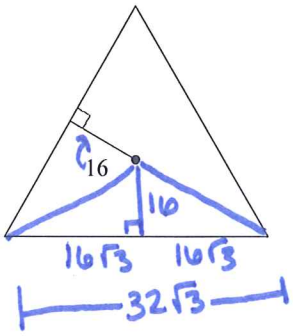




$A = 6 \cdot \frac{1}{2} \cdot 11 \cdot 5.5\sqrt{3}$

$\boxed{A = 181.5\sqrt{3}}$

6)

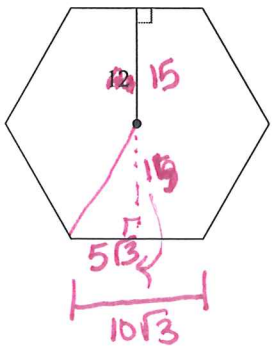


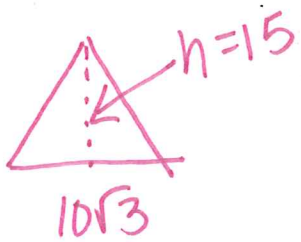
$A = 3\left(\frac{1}{2} b \cdot h\right)$

$A = 3\left(\frac{1}{2} 32\sqrt{3} \cdot 16\right)$

$\boxed{A = 768\sqrt{3}}$

7)



$A = 6$ 

$A = 6\left(\frac{1}{2} 10\sqrt{3} \cdot 15\right)$

$\boxed{A = 450\sqrt{3}}$