Length of Arc

Fractional part of circumference

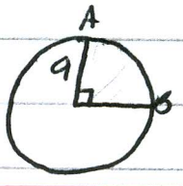
$\frac{m\angle}{360} \cdot 2\pi r$

Area of Sector

Fractional part of Area

$\frac{m\angle}{360} \cdot \pi r^2$

ex 1



length $AB = \frac{90}{360} \cdot 2\pi 9$

$\frac{1}{4}\, 18\pi$

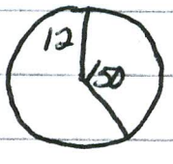
$\boxed{\frac{9}{2}\pi \text{ u}}$

$\frac{90}{360}\, \pi 9^2$

$\frac{1}{4}\, \pi 81$

$\boxed{\frac{81}{4}\pi \text{ u}^2}$

ex 2



$\frac{150}{360}\, 2\pi 12$

$\frac{5}{12} \cdot 24\pi$

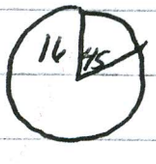
$\boxed{10\pi \text{ u}}$

$\frac{150}{360}\, 12^2 \pi$

$\frac{5}{12}\, 144\pi$

$\boxed{60\pi \text{ u}^2}$

ex 3



$\frac{45}{360} \cdot 2\pi 16$

$\frac{1}{8}\, 32\pi$

$\boxed{4\pi \text{ u}}$

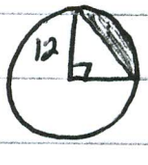
$\frac{45}{360} \cdot 16^2 \pi$

$\frac{1}{8}\, 256\pi$

$\boxed{32\pi \text{ u}^2}$

Segments – Area of Sector – Area of Δ

ex 4



$\frac{1}{4}\, 12^2\pi - \frac{12(12)}{2}$

$\boxed{36\pi - 72 \text{ u}^2}$

ex 5

$\frac{1}{6}\, 64\pi - \frac{64\sqrt{3}}{4}$

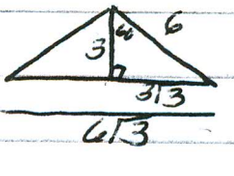
$\boxed{\frac{32}{3}\pi - 16\sqrt{3} \text{ u}^2}$

ex 6

$\frac{1}{3}\, 36\pi - 9\sqrt{3}$

$\boxed{12\pi - 9\sqrt{3} \text{ u}^2}$

triangle →



$6\sqrt{3}$

$\frac{(6\sqrt{3})3}{2}$