Circles: Basic Properties of Circles

Pi (π) is a number whose value is described by the relationship between the circumference and diameter of a circle: $\pi = {}^C/_d$. From this relationship, we can find both circumference and diameter:

Circumference: C = πd, or C = 2πr
Diameter: $d = {}^C/_\pi$

To find the area of a circle, use the formula $A = \pi r^2$.

Example:

Area
$A = \pi r^2$
$A = \pi(5)^2$
$= \pi(25)$
$= 3.14(25)$
$= 78.5$

r = 5
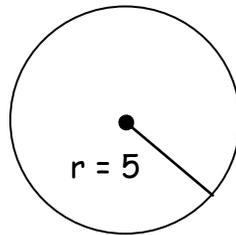
Circumference
C = 2πr
$= 2\pi(5)$
$= 10\pi$
$= 10(3.14)$
$= 31.4$

Practice. Find the circumference and area of the following figures.

1. r = 102
   C =
   A =

2. r = 3
   C =
   A =

3. r = 0.5
   C =
   A =

4. r = 4.28
   C =
   A =

5. r = 13
   C =
   A =

6. r = 2.7
   C =
   A =

7. r = 5.1
   C =
   A =

8. r = 3
   C =
   A =

9. r = 8.9
   C =
   A =

10. r = 1.2
    C =
    A =

Answer Key

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1. 640.56; 32668.56
2. 18.84; 28.26
3. 3.14; 0.785
4. 26.88; 57.52
5. 81.64; 530.66
6. 16.96; 22.89
7. 32.03; 81.67
8. 18.84; 28.29
9. 55.89; 248.72
10. 7.54; 4.52