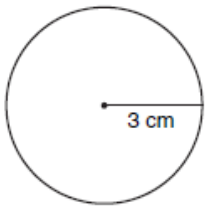
1) BEDMAS: 15 - 15 + 2

2) 10 % of 29

3) 50% of 8

4) Estimate the area of the circle:

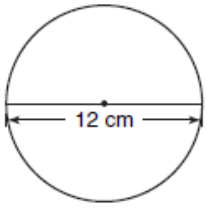
$A = \pi r^2$




5) 1/3 of 33

6) 20% of 30

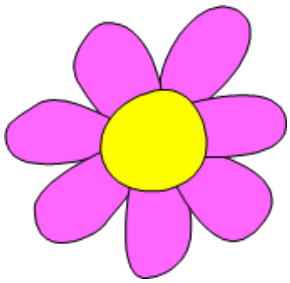
7) Estimate the Circumference of the circle:




8) 150 X 20

9) 10008 ÷ 2

10) What is the LCD for 2 and 3 ?



Bang. ☆☆☆

3. Use the results of questions 1 and 2. What happens to the area in each
   a) You double the radius of a circle.
   b) You triple the radius of a circle.
   c) You quadruple the radius of a circle.
   Justify your answers.

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

$r^2$
$2^2 = 4$
$3^2 = 9$
$4^2 = 16$

a) double

$A = \pi r^2$
$= 3.14(10^2)$
$= 3.14(100)$
$= 314\ cm^2$

$314 \div 78.5 = 4.0$
4x bigger

b) triple

$A = \pi r^2$
$= 3.14(15 \times 15)$
$= 3.14(225)$
$= 706.5\ cm^2$

$706.5 \div 78.5 = 9$
x9 bigger

c) quad

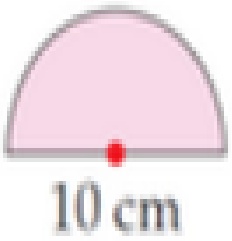
$A = \pi r^2$
$= 3.14(20 \times 20)$
$= 3.14(400)$
$= 1256\ cm^2$

$1256 \div 78.5 = 16$ x bigger

**Reflect**

You have learned two formulas for measurements of a circle.
How do you remember which formula to use for the area of a circle?

a




$A = \pi r^2$

$= 3.14(5 \times 5)$

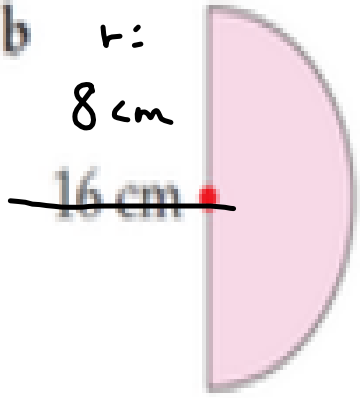
$= 3.14(25)$

$= 78.5 cm^2$ ÷ 2

$= 39.25 cm^2$

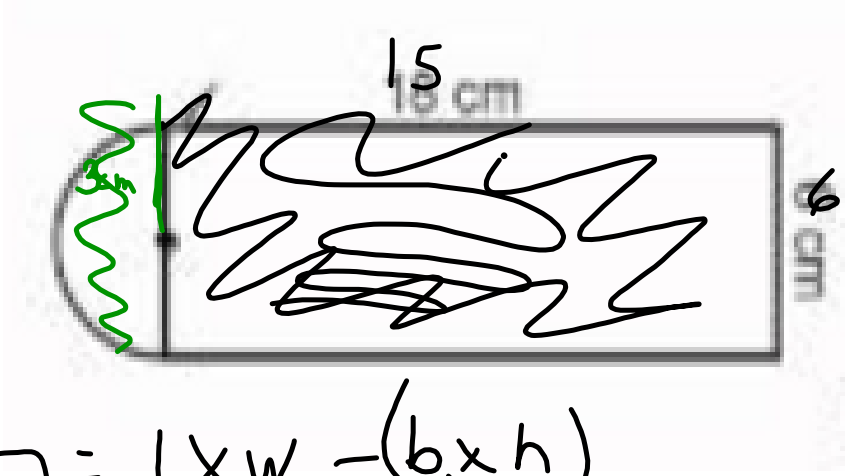
b r:

8 cm




c

Check worksheet from Friday...




$A_{\square} = l \times w - (b \times h)$

$= 15 \times 6$

$= 90 cm^2$

Total Area:

$= 90 cm^2 + 14.13 cm^2$

$= 104.13 cm^2$

$A = \pi r^2$

$= 3.14(3^2)$

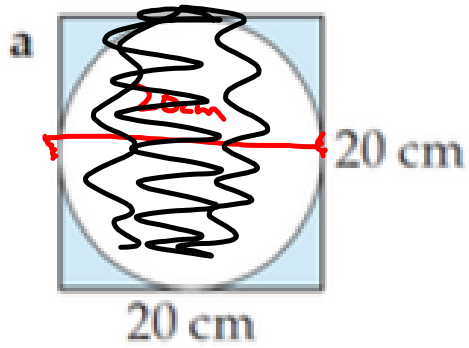
$= 3.14(3 \times 3)$

$= 3.14(9)$

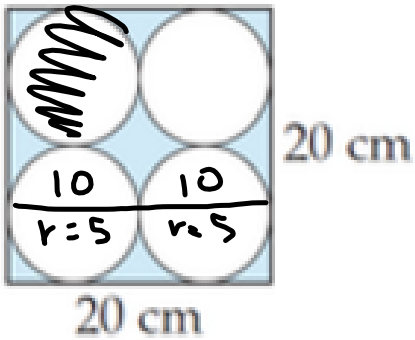
$= 28.26 cm^2 \div 2 = 14.13 cm^2$

Find the area of the shaded regions

a




b




$A_{\square} = bxh$

$20 \times 20$

$= 400 cm^2$

$A_{\circ} = \pi r^2$

$= 3.14(10 \times 10)$

$= 3.14(100)$

$= 314 cm^2$

subtract

$400 cm^2 - 314 cm^2$

$86 cm^2$

$A_{\square} = 400 cm^2$ $400 cm^2 - 314 cm^2 = 86 cm^2$

$A_{\circ} = \pi r^2$

$= 3.14(5 \times 5)$

$= 3.14(25)$

$= 78.5 cm^2 \times 4$

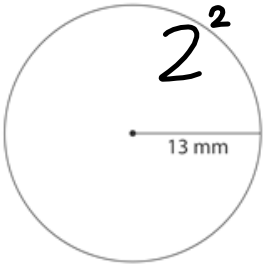
$= 314 cm^2$

$0.07^2 = 0.07 \times 0.07 = 0.0049$

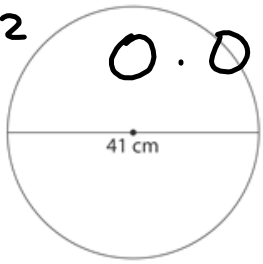
1. Calculate the area of each circle.
   Give the answers to one decimal place.
   Estimate to check your answers are reasonable.

$0.5 \times 0.5$

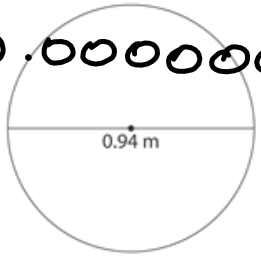
a) $2^2$




b) $0.2^2$ $0.02^2$




c) $0.00000002^2$




$A = \pi r^2$

$= 3.14(0.5)^2$

$0.5^2 =$ $2.0096$

$2.0$ $3^2 = 9$

$4^2 = 16$ $2^2 = 4$

$0.080$

$0.80$

$0.$

2. A carpenter is making a circular tabletop with radius 0.5 m. What is the area of the tabletop to the nearest tenth of a metre?

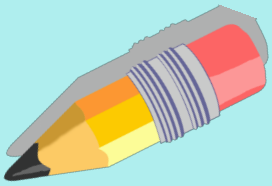
3. The diameter of a knob on a CD player is 0.78 cm.
   a) What is the radius of the knob?
   b) What is the circumference of the knob?
   c) What is the area of the knob?

**4.** A quilter is making a circular tree skirt to go under a decorative tree.
The radius of the tree skirt is 1.75 m.

**a)** What is the area of the tree skirt?

**b)** Suppose the quilter doubles the radius of the tree skirt.
What happens to the area?
What is the new area?

**c)** Suppose the quilter triples the radius of the tree skirt.
How can you find the new area without using the area formula?
What is the new area?

**5.** The circular vent on a furnace has diameter 19.4 cm.
What is the area of the vent?

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Questions
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