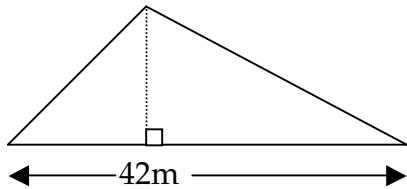


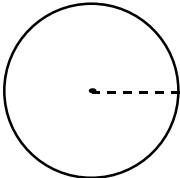
Chapter 8 Practice Test Form E

Solve each problem. Show all work on a separate worksheet.

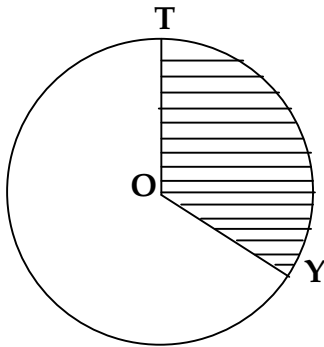
1. $h = 18\text{m}$ Area = -?-



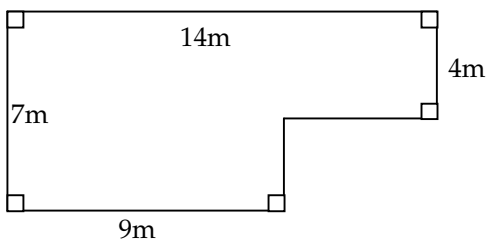
2. The circumference is 10π cm. Area = -?- .
Use $\pi \approx 3.14$.



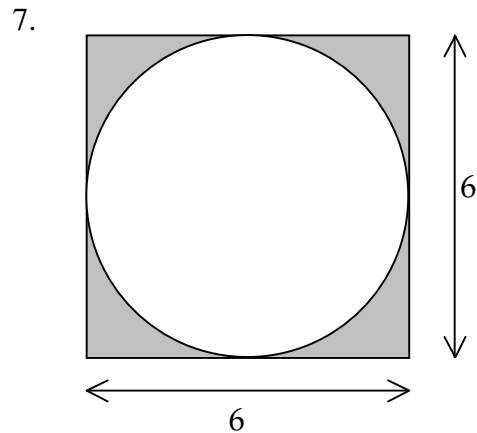
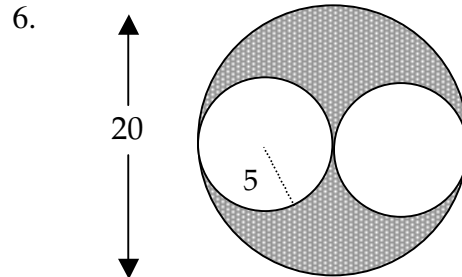
3. A trapezoid has one base of 19cm and it has a height of 14cm. What is the length of the second base if it has an area of 294cm^2 ?
4. Find the area of the sector below if $m\angle TOY = 120^\circ$ and $TO = 6\text{m}$.



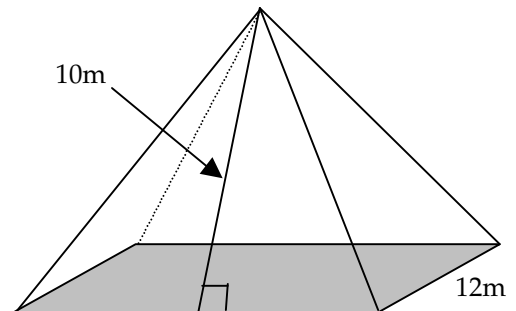
5. Find the total area of the polygon below.



Problems 6–7. Find the shaded area. All measurements are in centimeters. **Do NOT use an approximation for π .**



8. The pyramid below has a square base. Find its total surface area.



Answers provided below.....

Answers:

1. $A = \frac{1}{2} bh$

$$A = \frac{1}{2} (42)(18) = 378\text{m}^2$$

2. Since $C = D\pi$ and $C = 10\pi$ in this problem, $D = 10$ cm and the radius is 5cm.

$$A = \pi r^2$$

$$A = (3.14)(5^2) = 78.5\text{cm}^2$$

3. $A = (b_1 + b_2)(h/2)$

$$294 = (19 + b_2)(14/2)$$

$$294 = (19 + b_2)(7)$$

$$294 = 133 + 7b_2$$

$$161 = 7b_2$$

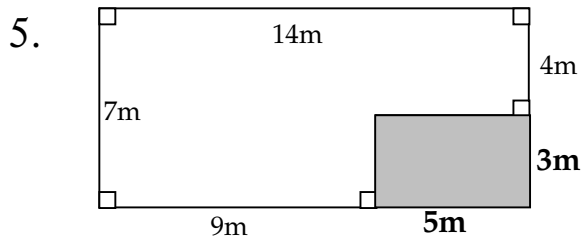
$$23\text{cm} = b_2$$

4. $A = \pi r^2$

$$A = \pi (6^2) = 36\pi$$

$$120^\circ/360^\circ = 1/3 \text{ of the circle,}$$

$$\text{so sector} = (1/3)(36\pi) = 12\pi$$



$$A_{\text{big rectangle}} - A_{\text{small rectangle}} =$$

$$(7 \times 14) - (3 \times 5) = 83\text{m}^2$$

6. Area of the Big Circle – Areas of the 2 smaller circles.

$$100\pi - 2(25\pi) = 50\pi$$

7. Area of the square – area of the circle.

$$(6)(6) - \pi 3^2 = 36 - 9\pi$$

8. The pyramid has 5 faces. A square base and 4 triangular faces.

Surface area =

$$(12)(12) + 4(\frac{1}{2} (12)(10))$$

$$= 144 + 240 = 384\text{m}^2$$