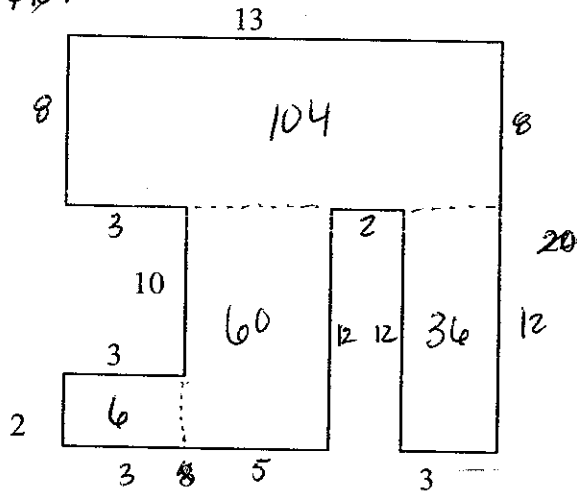


Find the perimeter and area of the complex shape.

10. $P = \underline{96}$ $A = \underline{206}$

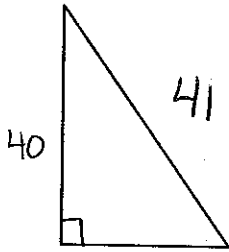
$13+20+3+12+2+$
 $12+8+2+3+10+$
 $3+8=$

$104+60+36+6$



Triangles: Find the requested measurement.

11.



9

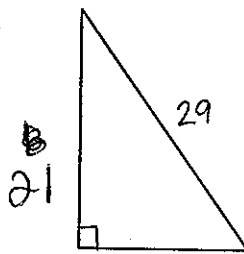
$$9^2 + 40^2 = c^2$$

$$81 + 1600 = c^2$$

$$1681 = c^2$$

$$41 = c$$

12.



20

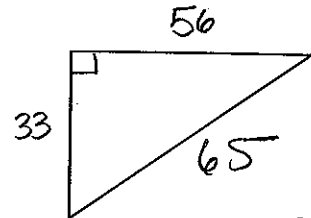
$$20^2 + b^2 = 29^2$$

$$400 + b^2 = 841$$

$$\underline{-400} \quad \underline{-400}$$

$$b^2 = 441 \Rightarrow b = 21$$

13.



$$33^2 + 56^2 = c^2$$

$$1089 + 3136 = c^2$$

$$4225 = c^2$$

$$65 = c$$

(Two things to do) 1. Could these sides be a triangle? 2. Is the triangle right, acute or obtuse?

14. Sides: 5, 12, 13

$5+12 > 13, 5+13 > 12,$
 $12+13 > 5$ Yes Δ

$$13^2 \square 5^2 + 12^2$$

$$169 \square 25 + 144$$

$$169 \square 169$$

$=$ RIGHT

15. Sides: 8, 17, 4

$8+4 < 17$
 \equiv Not a triangle!

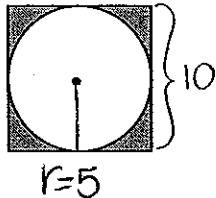
16. 8, 9, 16

$8+9 > 16, 8+16 > 9, 9+16 > 8$
Yes Δ

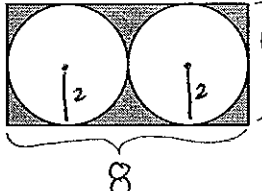
$16^2 \square 8^2 + 9^2$
 $256 \square 64 + 81$
 $256 \square 145$

$>$ means obtuse

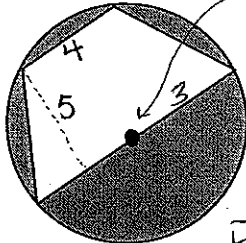
Find the EXACT measurement of the shaded area. (pi should be in your answer if there is a circle involved at all.)

17.  $lw =$
 square $10 \times 10 = 100$
 circle $\pi r^2 =$
 25π

$100 - 25\pi$

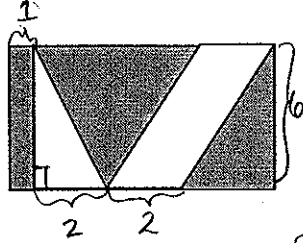
18.  $rectangle$
 $= lw$
 $= 4 \times 8 = 32$
 circle
 $= \pi r^2$
 $= 4\pi$
 2 circles $= 8\pi$

$32 - 8\pi$

19.  center of circle
 with radius 3
 circle
 $= \pi r^2$
 $= 9\pi$

trapezoid
 $= \frac{1}{2} (b_1 + b_2) \cdot h$
 $= \frac{1}{2} (6 + 4) \cdot 5$
 $= \frac{1}{2} (10)(5)$
 $= 25$

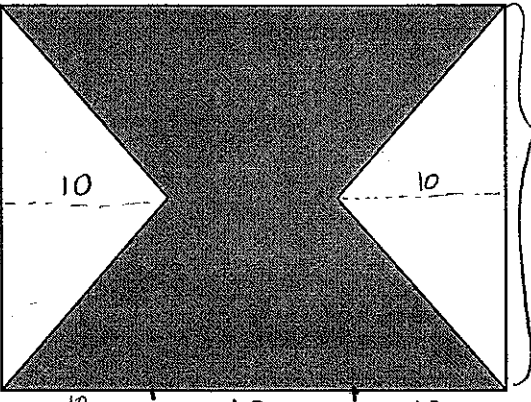
$9\pi - 25$

20.  $rectangle$
 $= lw$
 $= 6 \times 7$
 $= 42$

parallelogram
 $= bh$
 $= 2 \cdot 6$
 $= 12$

triangle
 $= \frac{1}{2} bh$
 $= \frac{1}{2} (2)(6)$
 $= 6$

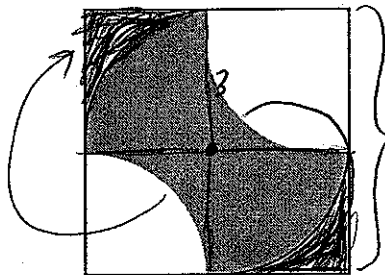
$42 - 12 - 6 = 24$

21.  $rectangle = lw$
 $= 32 \times 30 = 960$

triangle $= \frac{1}{2} bh$
 $= \frac{1}{2} (30)(10)$
 $= 150$
 2 triangles $= 300$

$960 - 300 = 660$

****CHALLENGE**

 $square =$
 36

$\frac{1}{4}$ circle $=$
 $= \frac{1}{4} \pi r^2$
 $= \frac{9\pi}{4}$

$\frac{1}{2}$ square $= 18$
 $-\frac{1}{2}$ circle $= -\frac{9\pi}{2}$

$\frac{1}{2}$ circle + missing part of corners $=$
 $18 + \frac{9\pi}{2} - \frac{9\pi}{2} = 18$