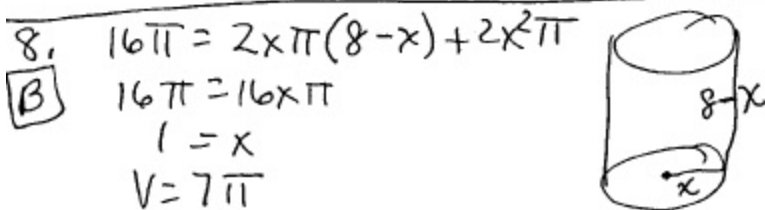
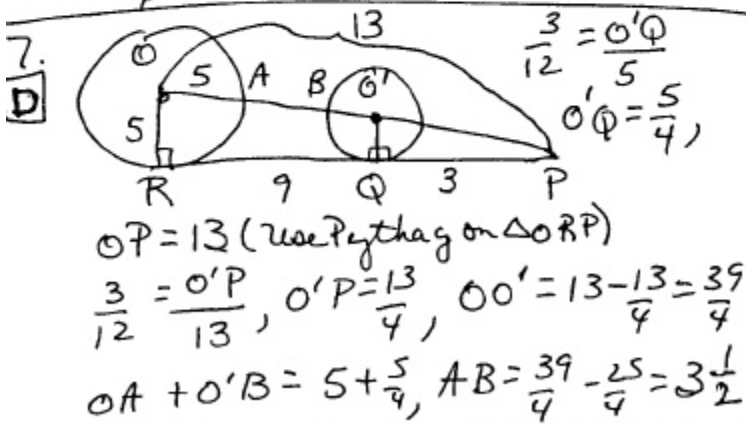
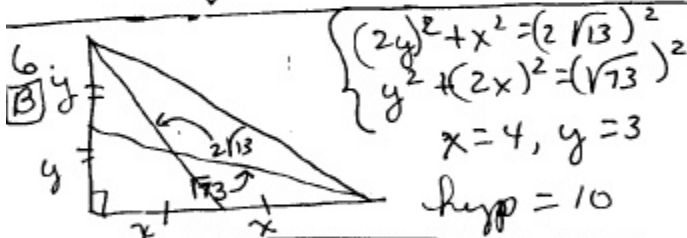
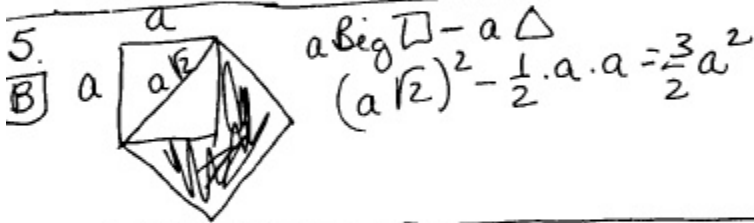
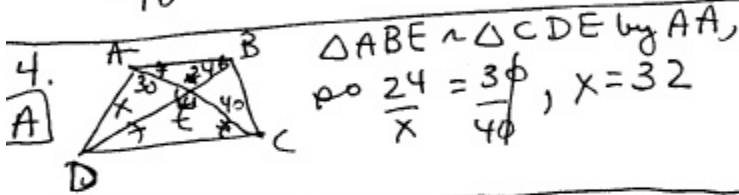
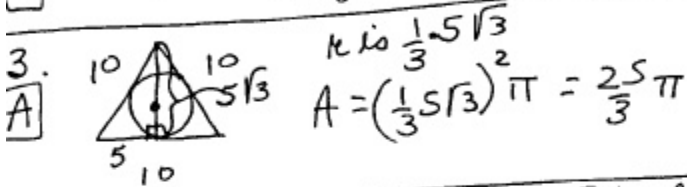


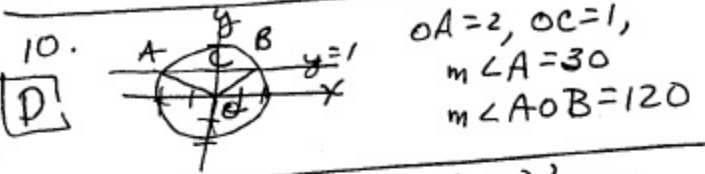
$$\frac{10}{x} = \frac{8}{12.6 - x}$$

$$x = 7$$

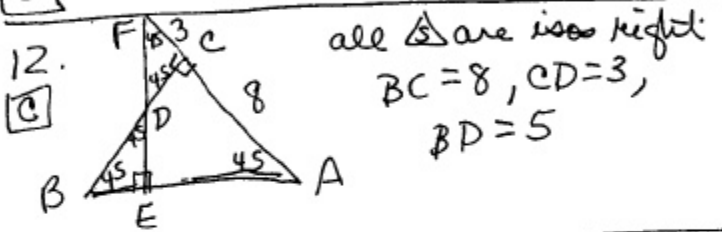
2. $18x = 90$
 $x = 5$
Angles are 25 & 65
Sum of 25 is 155



9. $\frac{1}{2} \cdot 15(x+4) - \frac{1}{2} \cdot 15x = 36$
[A]

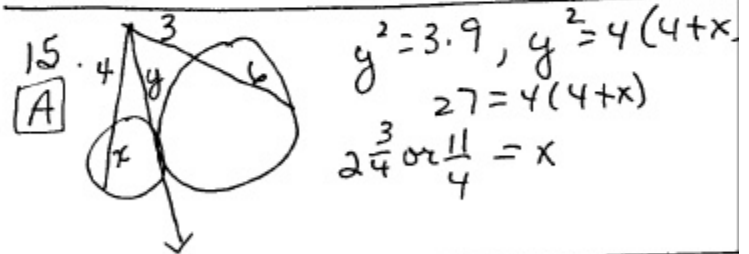


11. side = $4\sqrt{2}$, $A = \frac{(4\sqrt{2})^2}{2} = 16$
[C]

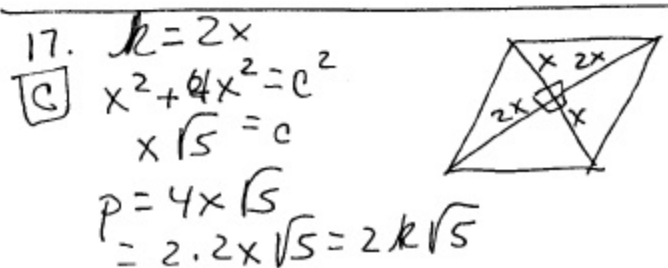


13. $25 = 2\pi r$, $20 = 2\pi r$
 $r = \frac{25}{2\pi}$, $r = \frac{10}{\pi}$; increase
[A]

14. $\frac{1}{3} \pi R^2 h_1 = \frac{3}{4} R^2 \pi h_2$
 $h_1 = \frac{9}{4} h_2$
[C]

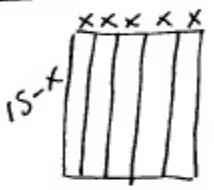


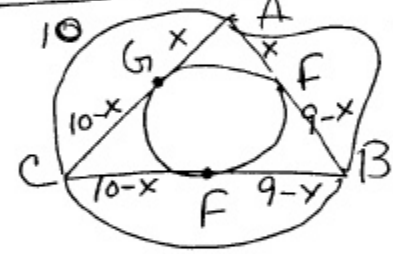
16. $6 = \sqrt{x(2x+1)}$; $0 = 2x^2 + x - 36$
 $0 = (2x+9)(x-4)$
 $x = -\frac{9}{2}, 4$
[C]

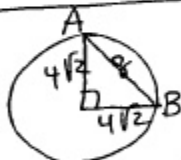


18. $m\widehat{BC} = 180 - 48 = 132$,
 [C] $m\angle BAC = \frac{1}{2} \widehat{BC} = 66$

19. $\frac{x^2}{2} = \frac{y^2}{4} \pi$, $x^2 = \frac{2y^2}{4} \pi$
 [D] $x = \frac{\sqrt{\pi}}{2} y$

20. [C]  $15 - x = 5x$
 $x = \frac{5}{2}$
 $P = 10x + 30 - 2x = 8(\frac{5}{2}) + 30 = 50$

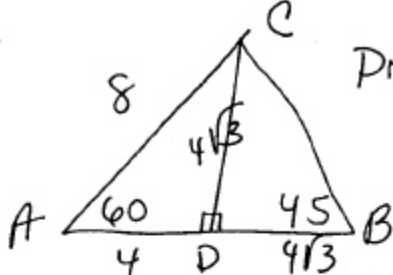
21. [E]  $10 - x + 9 - x = 13$
 $x = 3$

22. [D]  Central $\angle = 90^\circ$, $r = 4\sqrt{2}$, $A = 32\pi$



23. [A] 2 circles with $r = \frac{x}{2}$, $C = 2 \cdot 2\pi \cdot \frac{x}{2}$
 $= 2\pi x$

24. [A] $side = \frac{1}{2}(a+b)\sqrt{2}$
 $A = (\frac{1}{2}(a+b)\sqrt{2})^2 = \frac{1}{4}(a+b)^2 \cdot 2$
 $= \frac{1}{2}(a+b)^2$

25. [B] By Pythag, $AC = 16$,
 $\frac{10}{16} = \frac{DE}{12}$, $DE = \frac{15}{2}$

26. [E]  Draw alt to \overline{AB}
 $CD = 4\sqrt{3}$,
 $AD = 4$,
 $BD = 4\sqrt{3}$
 $AB = 4 + 4\sqrt{3}$

27. [C] always 360

28. [D]  $side = r\sqrt{2}$
 $Area = 2r^2$
 $side = r$
 $Area = 6 \cdot \frac{1}{2} r^2 \sqrt{3}$
 $= 3r^2 \sqrt{3}$
 $\frac{2r^2}{3r^2\sqrt{3}} = \frac{4}{3\sqrt{3}} = \frac{4\sqrt{3}}{9}$

29. [D] $\frac{14cm}{14\pi} = \frac{2000cm}{7\pi}$

30. [D] $\frac{\frac{4}{3}\pi r^3}{(\frac{1}{2}r\sqrt{2})^3} = 16\pi \cdot 3\sqrt{2}$
