

B 1. The points can be collinear

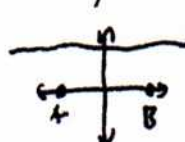
A 2. $\frac{2\sqrt{2}}{4} \Rightarrow \frac{2\sqrt{2}}{2} \quad z^2 = 4$

A 3. $\frac{2x}{A} \frac{3x}{B} \frac{x}{C} \quad 2x + 3x = 10$
 $x = 2$

A 4. Realize that the area is products of the roots $\therefore \frac{c}{a}$

A 5. If $p \Rightarrow q$, AND $q \Rightarrow r$ then $p \Rightarrow r$
 Yes

C 6. Only base and height matter

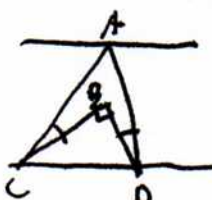


$$\frac{10(5)}{2} = 25$$

C 7. $\sqrt{(-3-3)^2 + (-2-6)^2}$
 $= \sqrt{36 + 64} = 10$

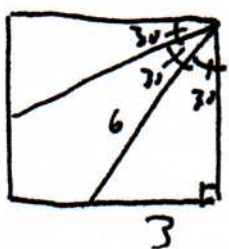
D 8. Diameter is constrained by smallest length (3)

E 9. $45 + 270 + x = 360$
 $x = 45$

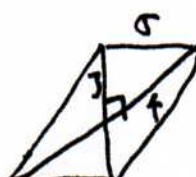


A 10. $2\pi r = 8\pi \quad \pi r^2 = 16\pi$
 $r = 4$

A 11. Factor: $(j+2)^2$ but we only want the positive values, so $|j+2|$

12.  $(3\sqrt{3})^2 = 27$

13. 1, 1, 2, 3, 5, 8, 13, 21, 34, 55
 Fibonacci Sequence

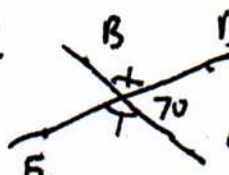
14.  $\frac{3 \cdot 5}{2} = 7.5$
 4 of the triangle is 24.

15. Definition of a point is undefined

16. Triangle inequality

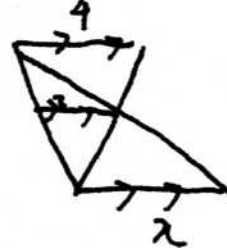
$A + B > C$

That only $\sqrt{3}$ works

17.  $\angle DAC + \angle EAC = 180$
 $\angle EAC = 110$
 $2(\angle BAC) = 220$

18. Slope = $\frac{1}{2}$
 $y - 2 = \frac{1}{2}(x - 3)$
 $2y - 4 = x - 3$
 $x - 2y = -1$ which is equivalent to A

E 24.

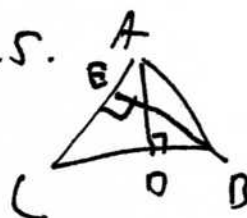


$$\frac{1}{4} + \frac{1}{x} = \frac{1}{3}$$

$$x = 12$$

$$12 \cdot 2 = 24$$

B 25.



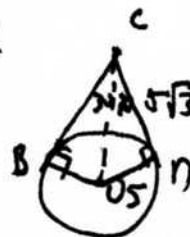
$$\frac{8 \cdot 5}{2} = \frac{10 \cdot x}{2}$$

$$x = 4$$

C 26. Area $= \frac{1}{2}ap = \frac{1}{2}as$

$$5 \cdot 12 = 60$$

B 27.



$$\left[\frac{5(5\sqrt{3})}{2} \right] = \frac{1}{2}x \cdot 5$$

$$25\sqrt{3}$$

A 28.



$$\pi r^2 \quad 4r^2$$

$$\square - \bigcirc = \square$$

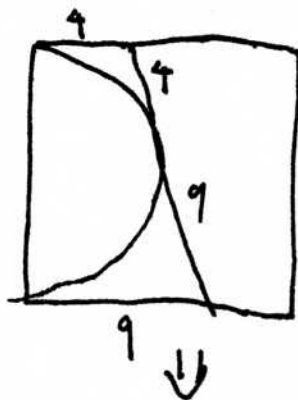
$$= \frac{4r^2 - \pi r^2}{4r^2} = 1 - \frac{\pi}{4}$$

over all possible

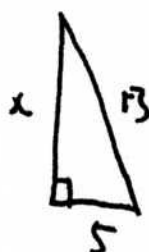
B 29. 15

D 30. Obvious?

D 19.

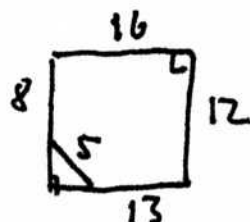


Tangents from a point are equal.



$$x = 12$$

B 20.



so

$$16 \cdot 12 - \frac{5 \cdot 4}{2} = 186$$

E 21. Triangle inequality again

C 22. The lines could be one line, meaning 2 regions



D 23. $\angle A \cong \angle D = 100$
 $\angle B \cong \angle E = 50$
 $\angle C \cong \angle F = 30$