

9-18-18 5<sup>th</sup> Geo

- ① If you like hot dogs,  
you like hamburgers.

Inverse

If you don't like hot dogs,  
you don't like hamburgers.

- ② a: you are rich  
b: you are nice  
c: you have cats

Translate

$$a \rightarrow \sim c$$

If you are rich, then you don't  
have cats

$$b \rightarrow (\sim a \vee c)$$

If you are nice, then you  
are not rich or you have  
cats.

③ If  $\angle 1 + \angle 2 = \angle 3$  and  
 $\angle 2 = 50^\circ$ , then  $\angle 1 + 50^\circ = \angle 3$ .  
Substitution

④  $\angle ABC = \angle ABC$  Reflexive

⑤ If  $\angle 1 + \angle 2 = \angle 2 + \angle 3$ , then  
 $\angle 1 = \angle 3$ .  
Subtraction

⑥ If  $\angle ABC + \angle XYZ = 70^\circ$ , then  
 $70^\circ = \angle ABC + \angle XYZ$ .  
Symmetric

⑦ If  $\angle 1 = 25^\circ$ , then  
 $\angle 1 + \angle 2 = \angle 2 + 25^\circ$ .  
Addition

⑧ If  $\angle A = \angle B$  and  $\angle B = 50^\circ$ ,  
then  $\angle A = 50^\circ$ .  
Transitive

⑨ What is the area of a  
circle with a diameter of  
10 cm?



$$\begin{aligned} A &= \pi r^2 \\ &= \pi \cdot 5^2 \\ &= 25\pi \\ &\approx 78.5 \text{ cm}^2 \end{aligned}$$

⑩ The area of a circle is about  $254.469 \text{ cm}^2$ .

What is the radius of the circle?

$$A = \pi r^2$$

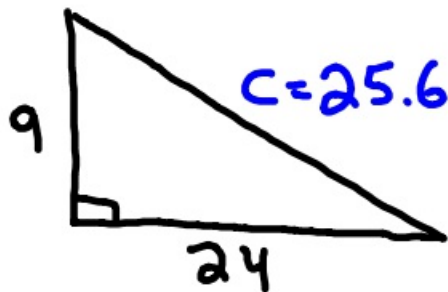
↓

$$\frac{254.469}{\pi} = \frac{\pi \cdot r^2}{\pi}$$

$$\sqrt{81} \approx \sqrt{r^2}$$

$$r \approx 9$$

⑪ What is the perimeter of



$$\begin{aligned} 9^2 + 24^2 &= c^2 \\ 81 + 576 &= c^2 \\ \sqrt{657} &= \sqrt{c^2} \end{aligned}$$

$$P = 9 + 24 + 25.6 \approx 58.6 \text{ cm} \quad c \approx 25.6$$

# Geo

6<sup>th</sup> 9/18/18

① If you like ice cream,  
you are cool.

What is the inverse of  
this statement?

If you don't like ice  
cream, you are NOT cool.

② a: you are funny  
b: you don't like cats  
c: you like the color green.

Translate

$a \rightarrow \sim b$

If you  $a \rightarrow$  funny, you like cats.

$b \rightarrow (c \wedge a)$

If you don't like cats, then  
you like the color green and  
you are funny.

③ If  $\angle 1 = 30^\circ$  and  $\angle 1 + \angle 3 = \angle 5$ ,  
then  $30^\circ + \angle 3 = \angle 5$ .

Substitution

④ If  $\angle 1 + \angle 2 = \angle 2 + \angle 3$ , then  
 $\angle 1 = \angle 3$ .

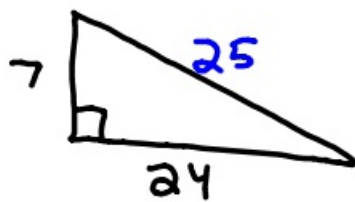
Subtraction

⑤ If  $\angle 1 = 50^\circ$ , then  
 $\angle 1 + \angle 7 = 50^\circ + \angle 7$ .

Addition

⑥  $\angle ABC = \angle ABC$   
Reflexive

⑦ What is the perimeter of



$$a^2 + b^2 = c^2$$

$$7^2 + 24^2 = c^2$$

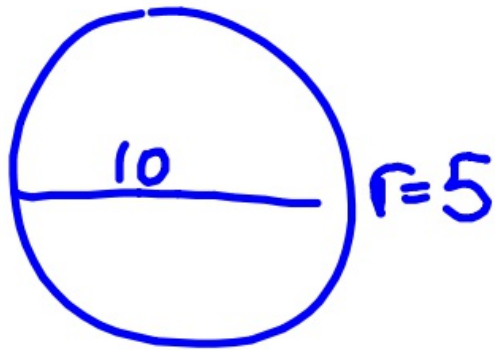
$$49 + 576 = c^2$$

$$\sqrt{625} = c$$

$$P = 7 + 24 + 25 = 56 \text{ cm}$$

$$c = 25$$

- ⑧ What is the area of a circle with a diameter of 10 cm?



$$\begin{aligned} A &= \pi r^2 \\ &= \pi \cdot 5^2 \\ &= 25\pi \\ &\approx 78.5 \text{ cm}^2 \end{aligned}$$

- ⑨ The area of a circle is about  $804.2477 \text{ cm}^2$ . What is its radius?

$$\begin{aligned} A &= \pi r^2 \\ \downarrow \\ \frac{804.2477}{\pi} &\approx \frac{\pi r^2}{\pi} \\ \sqrt{256} &\approx \sqrt{r^2} \\ r &= 16 \text{ cm} \end{aligned}$$