

$\lfloor x \rfloor$  , the floor function of  $x$ , is defined as the greatest integer that is  $\leq x$ .

Draw the graph of  $y = \lfloor x \rfloor$

True or False?

$$\lfloor 3.5 \rfloor = 3$$

...the greatest integer that is  $\leq x$

True or False?

$$\lfloor 5 \rfloor = 4$$

...the greatest integer that is  $\leq x$

True or False?

$$\lfloor -1.2 \rfloor = -1$$

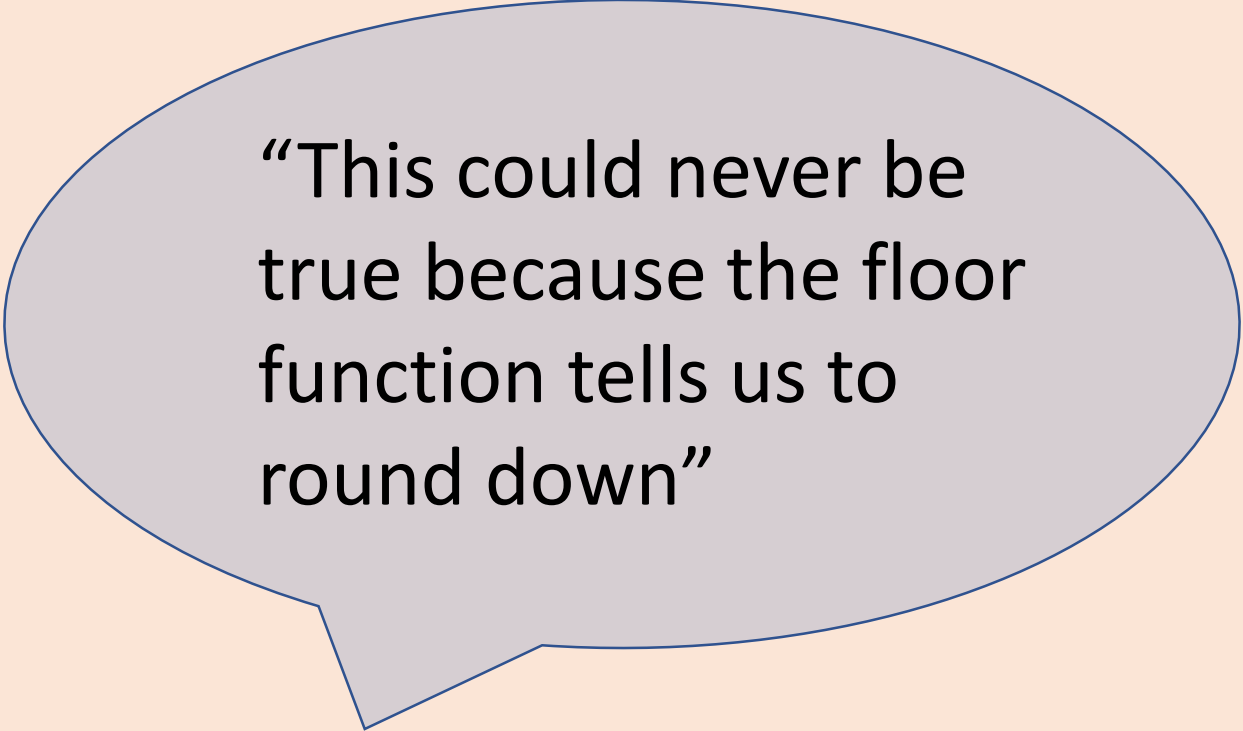
True or False?

$$[2 \leq x \leq 3] = 2$$

...change one thing to make this true

When does

$$\lfloor x \rfloor = x ?$$



“This could never be true because the floor function tells us to round down”



The floor function...

Write a sentence about the floor function.

It **must** include the following words:

Round  
Unless

Correct the three errors:

<b>x</b>	<b>-2.1</b>	<b>-0.5</b>	<b>0</b>	<b>0.3</b>	<b>1</b>	<b>1.2</b>	<b>2</b>
y	-2	-1	0	0	1	1	1



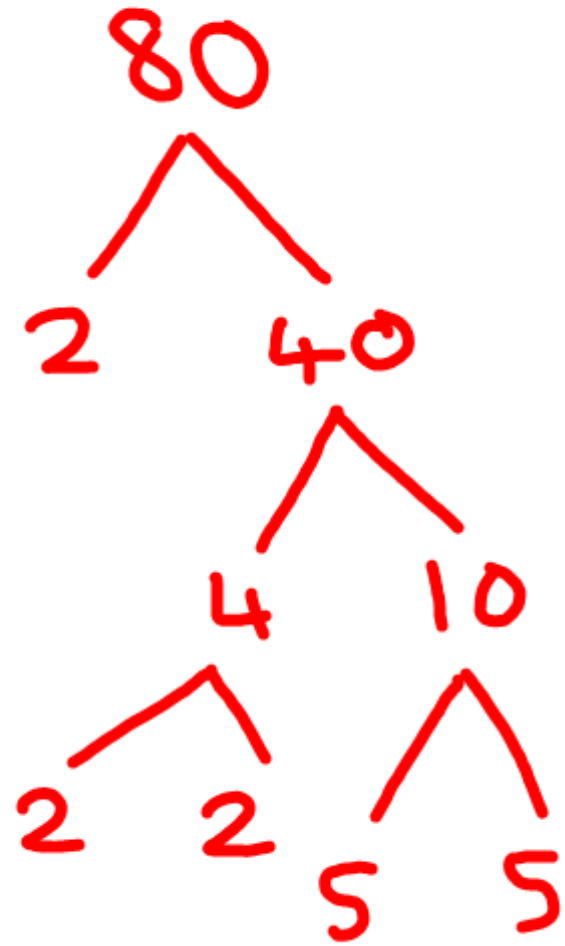


True or False?

Always, sometimes,  
never?

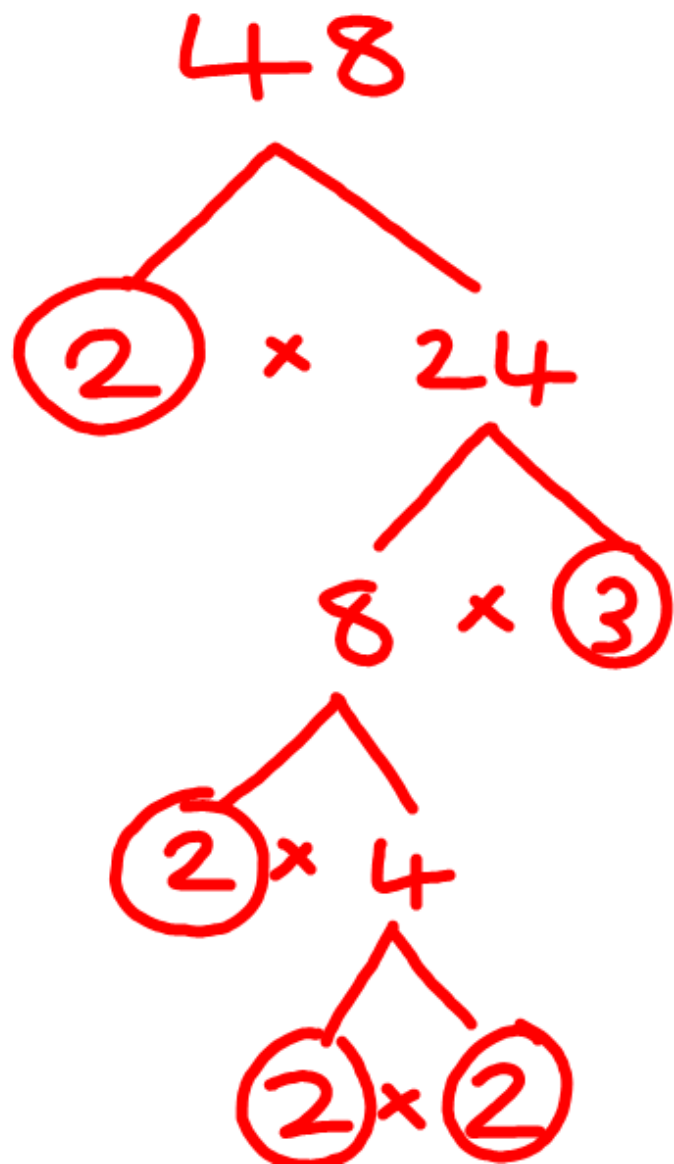
Is this a good first  
step?

Write 80 in prime factor form:



$$\begin{aligned} 80 &= 2 \times 2 \times 2 \times 5 \times 5 \\ &= \underline{\underline{2^3 \times 5^2}} \end{aligned}$$

Write 48 in prime factor form:



$$48 = 2, 2, 2, 2, 3$$

$$= 2^3, 3$$

True or False?

(1)  $\frac{3}{4} = \frac{3 \times 3}{4 \times 4}$  **F**

(2)  $\frac{2}{7} = \frac{4}{14}$  **T**

(3)  $\frac{2}{3} = \frac{2 + 4}{3 + 4}$  **F**

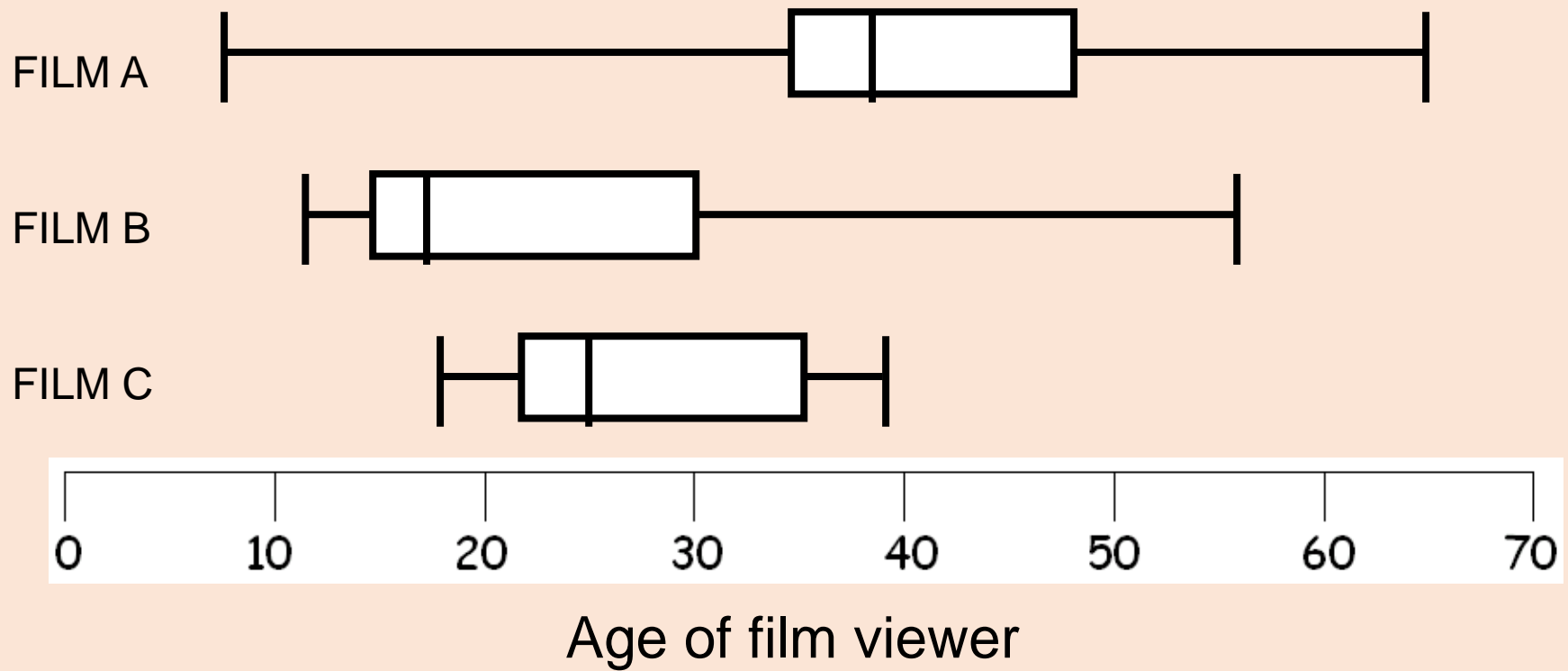
(4)  $\frac{12}{15} = \frac{12 \div 3}{15 \div 3}$  **T**

What about this?

$$\frac{2}{7} = \frac{2 \times 0}{7 \times 0} \quad \mathbf{F}$$

Find all of the fractions that are equivalent to  $\frac{12}{30}$ , which have a denominator less than 30.

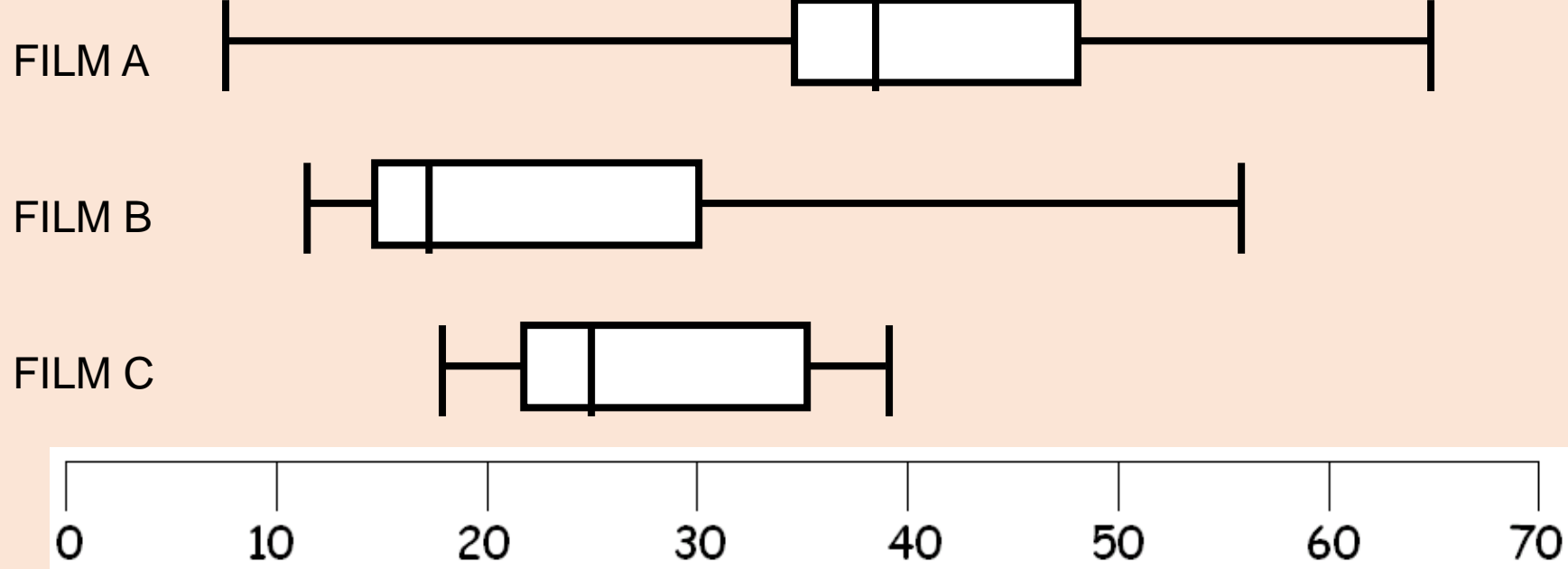
$$\frac{12}{30} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$$



What can you tell about these films from this box plot?

Could you work out the genre of these films?

Compare the box plots and write down anything you notice



Which of the films do you think you would not be allowed to legally watch at the cinema?

**A** Film A

**B** Film B

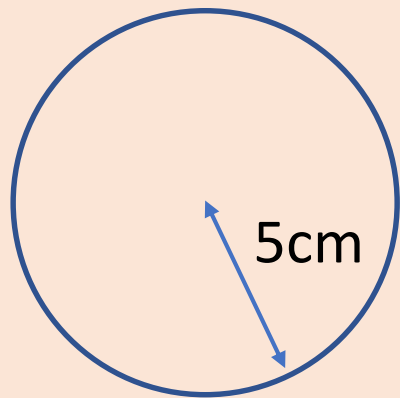
**C** Film C

**D** Cannot tell



$$\text{Circle Area} = \pi \times r^2$$

T or F

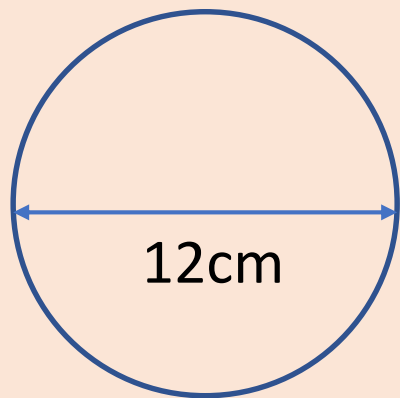


$$\text{Area} = \pi \times 5^2$$

$$\text{Area} = \pi \times 10$$

$$\text{Circle Area} = \pi \times r^2$$

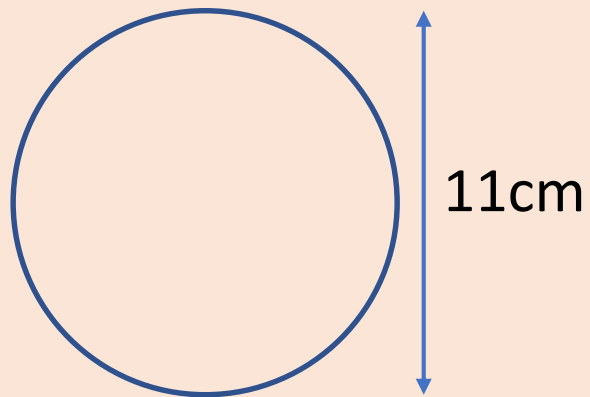
T or F



$$\text{Area} = \pi \times 12^2$$

$$\text{Circle Area} = \pi \times r^2$$

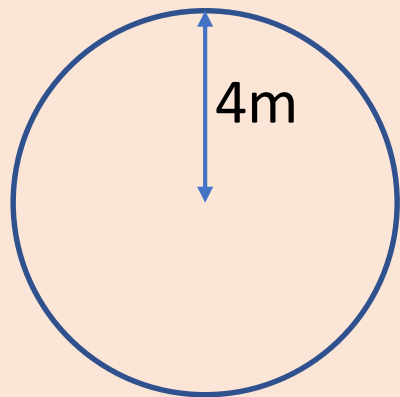
T or F



$$\text{Area} = \pi \times 5.5^2$$

$$\text{Circle Area} = \pi \times r^2$$

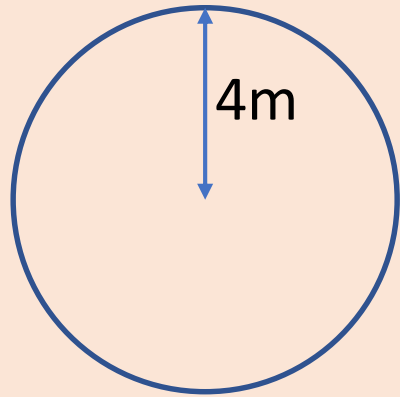
T or F



$$\text{Area} = \pi \times 4\text{m}^2$$

$$\text{Circle Area} = \pi \times r^2$$

T or F



$$\text{Area} = 4 \times \pi^2$$

We can't swap our Area formula around, because we need to make sure we square the correct value.

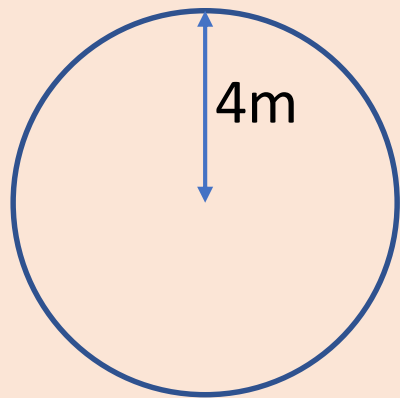


For this rectangle,  
Area = 4 x 10

Would it be okay to say  
Area = 10 x 4?

$$\text{Circle Area} = \pi \times r^2$$

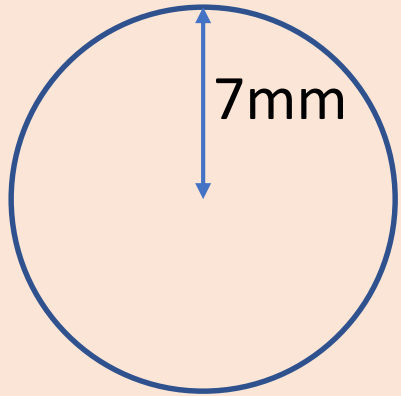
T or F

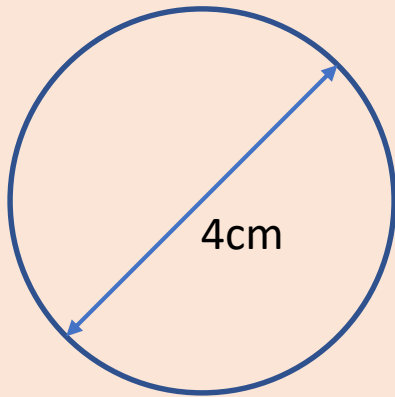
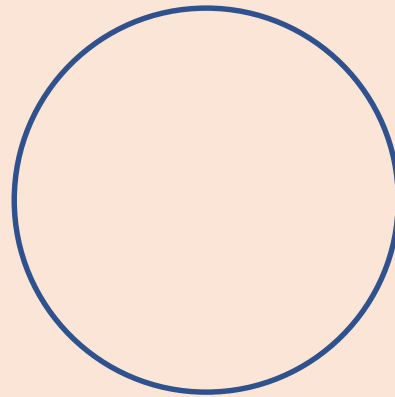
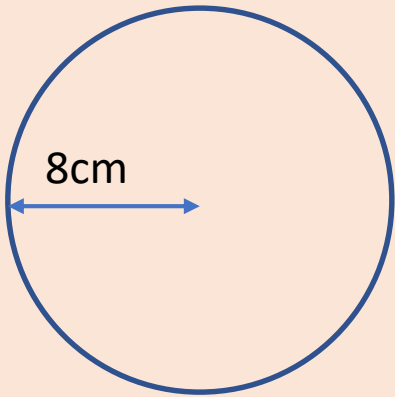
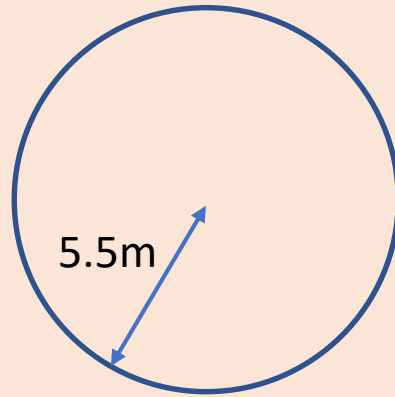
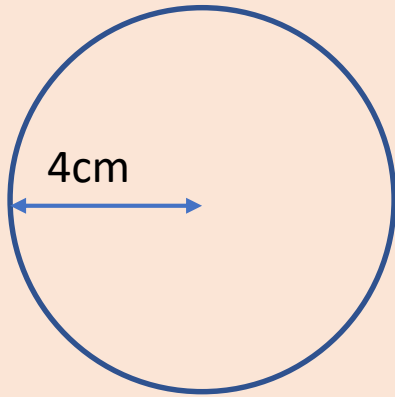


$$\text{Area} = (\pi \times 4)^2$$

$$\text{Circle Area} = \pi \times r^2$$

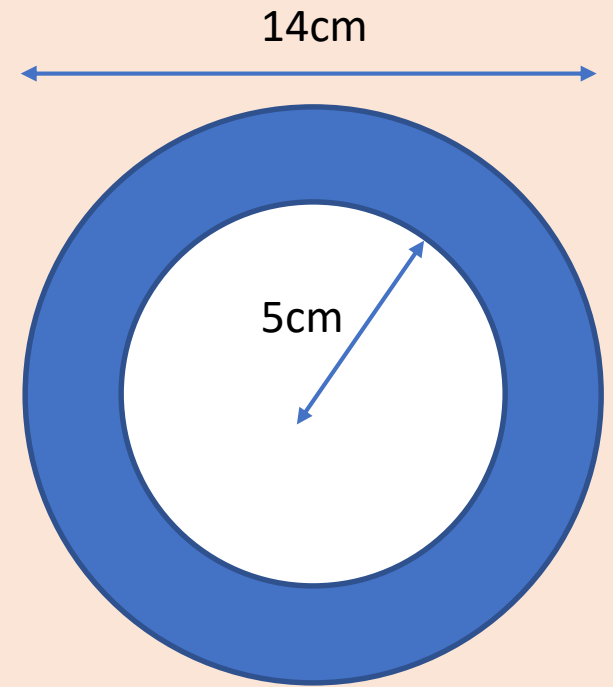
All write down a first line of working:



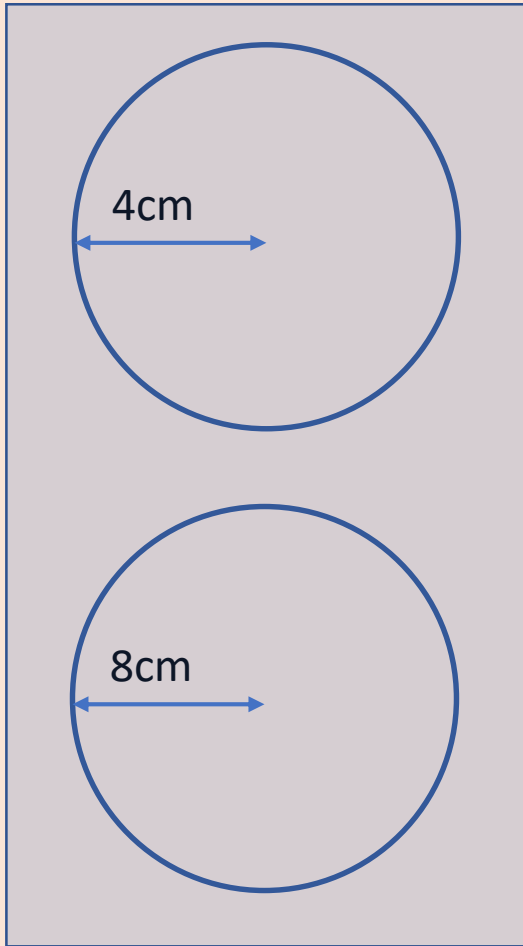


The diagram below is made from two concentric circles (circles with the same centre).

Calculate the Area of the blue section of the diagram:







50.3

201

Dave is unhappy with the answers to Q1 and Q2.

He says:

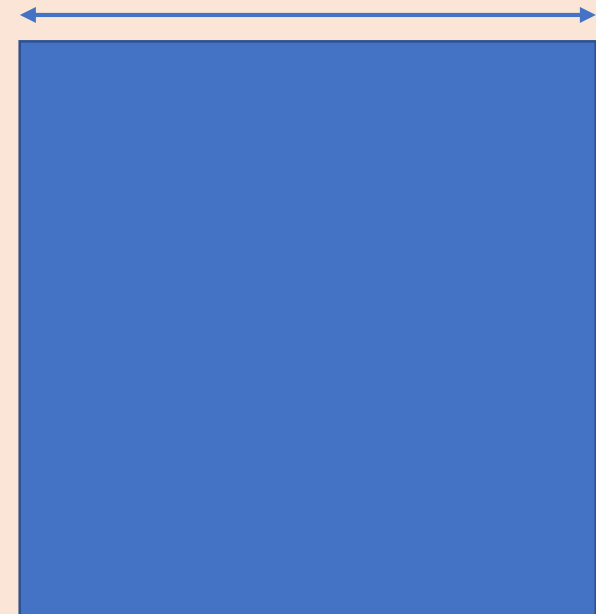
“Because the radius on Q2 is twice as big as the radius on Q1, our answer for Q2 should be double Q1.”

“I can see that the second answer is not double the first answer, so something must have gone wrong.”

original radius



doubled radius



Because we are squaring, is lengths double, Areas will x4 (2 squared)

Is the following statement correct..?

The calculation

$$\pi \times 6^2$$

Finds the area of a circle with radius 6

What does the following calculation find?

$$\pi \times 3.5^2$$

Can you match up the calculations with each of the descriptions?

$$\pi \times 3.5^2$$

Finds the area of a circle with radius 7cm

Finds the area of a circle that fits perfectly inside a 4cm square

Finds the area of a circle with diameter 7cm

$$\pi \times 4^2$$

$$\pi \times 7^2$$

Finds the area of a circle with radius 4cm

There should be one description left over. Can you write a calculation for it?