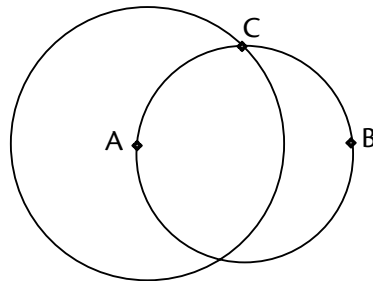


# Weekly Quiz

## Questions:

**Week 12**– Solutions to the maths office by Thursday 18th November

1. What is 40% of 50% of £60?
2. When I drop a ball onto the ground it bounces up to a third of the height from which I dropped it. Just now I noticed that after the second bounce it reached a height of 9 cm. From what height did I first let it fall?
3. A candle will burn for 100 hours. If I light it a midnight on Sunday, on which day will it burn out?
4. The smaller circle has radius 10 units; AB is a diameter. The larger circle has centre A, radius 12 units and cuts the smaller circle at C. What is the length of chord CB?



5. What is the smallest prime number that will divide exactly into:  $3^{333} + 5^{555}$  ?  
[n.b.  $3^2 = 3 \times 3$ ;  $3^4 = 3 \times 3 \times 3 \times 3$ ]

# Weekly Quiz

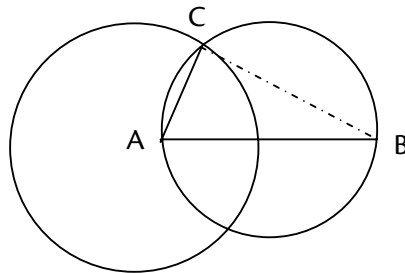
## Solutions:

**Week 12 – 18/11/04**

1.  $40\% \times 50\% \times £60 = £12$
2. 9 cm is  $\frac{1}{3}$  of 27cm which is  $\frac{1}{3}$  of 81 cm.
3. 24:00 Sunday + 100 hours goes to Friday

24 hours later midnight Monday  
48 hours later midnight Tuesday  
72 hours later midnight Wednesday  
96 hours later midnight Thursday  
Therefore 04:00 hours on Friday morning.

4.



$$CB^2 = 20^2 - 12^2$$

$$CB^2 = 16^2$$

Therefore  $CB = 16$  units

1.  $3^{3333}$  is odd,  $5^{5555}$  is odd therefore added together they are even and divisible by 2.