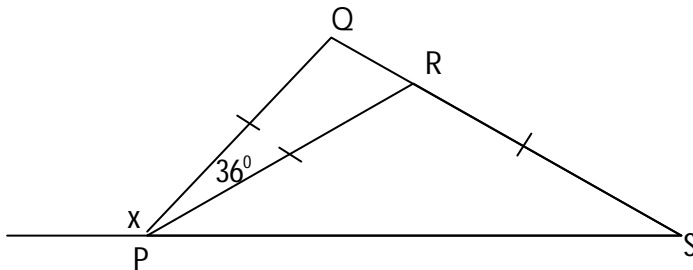


Weekly Quiz

Questions:

Week 4 – Solutions to the maths office by Thursday 30th September

1. The digits of 2004 (this year) add to 6. How long must we wait before this happens again?
2. Find the value of $3 + 4 \times 5 - 6 \times 2$.
3. In the diagram. $PQ = PR = RS$. What is the size of angle x ?



4. Daily at noon, four mathematicians meet for lunch at the Prime Rock Café. Although each eats a differently priced snack, they share the bill equally. Yesterday this resulted in one mathematician paying £1 less than the cost of her snack, another paying £3 more, another £4 less and the last mathematician paid £4. What was the actual price of each snack?
5. Is the number $2^{2222} + 3^{3333}$ even or odd?

Weekly Quiz

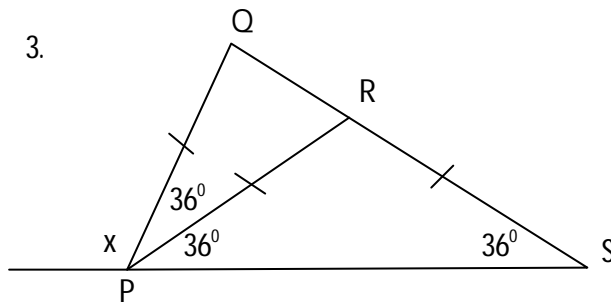
Solutions:

Week 4 – 30/09/04

1. 2013 digits add to 6 therefore have to wait 9 years.

2.

$$\begin{aligned} & 3 + 4 \times 5 - 6 \times 2 \\ & = 3 + 20 - 12 \\ & = 11 \end{aligned}$$



Triangle PQR isosceles therefore angles $\angle PQR$ and $\angle PRQ$ are the same 72°
Angle $\angle PRS = 108^\circ$ – angles on a straight line add to 180°
Triangle PRS is isosceles therefore angles $\angle RPS$ and $\angle RSP$ are both equal to 36°

Angles on a straight line at P add to 180° , therefore $x = 108^\circ$

4. Each person pays £4 (from last clue) - $\text{£}4 \times 4 = 16$ total bill.

Mathematician A's snack cost's £5.00

Mathematician B's snack cost's £1.00

Mathematician C's snack cost's £8.00

Mathematician D's snack cost's £2.00

5. 2^{2222} is even, 3^{3333} is odd therefore added together they are odd.