Q17

$$P_{n+1} = 1.04(P_n - G)$$

$P_{2015} = 200000$

$P_{2016} = 200720$

$$200720 = 1.04(200000 - G)$$

$$\frac{200720}{1.04} = 200000 - G$$

$$193000 = 200000 - G$$
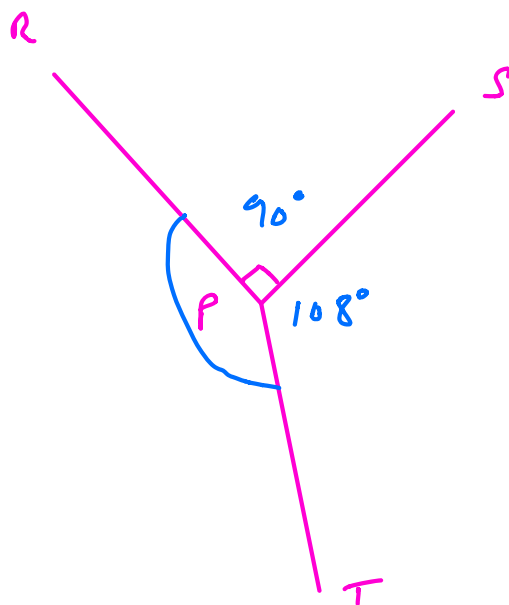
$$G = 200000 - 193000$$

$$\underline{G = 7000}$$

$$P_{2017} = 1.04(200720 - 7000)$$

$$= 201468.8$$

Answer   201468   or   201469

Q9

Find
Internal angle of
regular pentagon

$$Ext \angle = \frac{360}{5} = 72$$

$$Int \angle = 180 - 72$$

$$= 108°$$

$\angle RPT = 360 - (108 + 90) = 162°$

$\therefore$ int $\angle$ of regular polygon $= 162°$

ext $\angle$ $= 180 - 162 = 18°$

$$\frac{360}{n} = 18$$

$$360 = 18n$$

$$\frac{360}{18} = n$$

$$\underline{n = 20 \text{ sides}}$$

10)

$$2x + 3y = 6 \qquad \text{①}$$

$$7x - 2y = 1 \qquad \text{②}$$

①×2 $4x + 6y = 12 \qquad \text{③}$

②×3 $21x - 6y = 3 \qquad \text{④}$

③+④ $25x \qquad\qquad = 15$

$$x = \frac{15}{25} = 0.6$$

Sub in ③ $4(0.6) + 6y = 12$

$$2.4 + 6y = 12$$

$$6y = 12 - 2.4$$

$$6y = 9.6$$
$$y = \frac{9.6}{6} = 1.6$$

$$x = 0.6$$
$$y = 1.6$$

$$2x + 3y = 6 \quad \text{①}$$
$$7x - 2y = 1 \quad \text{②}$$

①×7 $\quad 14x + 21y = 42 \quad \text{③}$

②×2 $\quad 14x - 4y = 2 \quad \text{④}$

③ - ④ $\quad\quad\quad 25y = 40$

$$y = \frac{40}{25} = \frac{8}{5} = 1.6$$

Sub in ①

$$2x + 3 \times 1.6 = 6$$
$$2x + 4.8 = 6$$
$$2x = 6 - 4.8$$
$$2x = 1.2$$
$$x = \frac{1.2}{2} = 0.6$$

$$x = 0.6$$
$$y = 1.6$$