

新竹市110學年度國中數學能力競賽 數學達人賽 第二部分答案卷

【題組一】

(1) $\frac{4x-12}{5}$

(2)

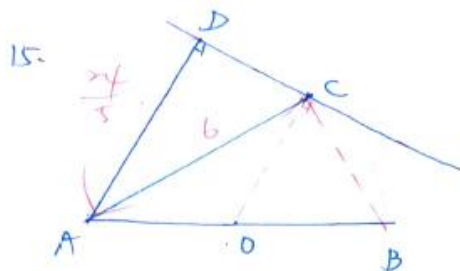
$$\left(\frac{4x-12}{5} - 5\right) \times 6 = 4x - 12 - 2$$

$$\frac{6}{5}(4x - 12) - 30 = (4x - 12) - 2$$

$$\frac{1}{5}(4x - 12) = 28$$

$$x = 38$$

【題組二】



11)

連接 $\overline{OC}$ $\because C$ 為切點 $\therefore \overline{OC} \perp$ 直線 CD

又 $\overline{AD} \perp$ 直線 $CD \therefore \overline{OC} \parallel \overline{AD}$

$$\Rightarrow \angle DAC = \angle OCA$$

$$\text{又 } \because \overline{OC} = \overline{OA} \therefore \angle OCA = \angle OAC$$

$$\therefore \angle DAC = \angle OAC$$

即 $\overline{AC}$ 平分 $\angle BAD$

12) 連接 $\overline{BC}$

$$\because \triangle ADC \sim \triangle ACB$$

$$\therefore \frac{\overline{AD}}{\overline{AC}} = \frac{\overline{AC}}{\overline{AB}}$$

$$\Rightarrow \overline{AB} = 6 \times 6 \div \frac{24}{5} = \frac{15}{2}$$