臺北市立瑠公國民中學108學年度第一學期八年級數學科第二次定期評量解答卷

**※圖形僅供參考，答案以黑色原子筆寫在答案卷**

 八年\_\_\_\_ 班 座號:\_\_\_\_\_ 姓名:\_\_\_\_\_\_\_\_\_\_\_\_\_

一、單選題：30分(每題3分)

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1. | C | 2. | B | 3. | A | 4. | A | 5. | A | 6. | D | 7. | B | 8. | D | 9. | C | 10. | D |

二、填充題：60分(每格3分) **【答案需以最簡根式表示，否則不予計分】**

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| --- | --- | --- | --- | --- |
| (1) | (2) | (3) | (4) | (5) |
| 17 | $$20\sqrt{2}$$ | $$8+4\sqrt{3}$$ | $$24\sqrt{2}$$ | $$\frac{5\sqrt{2}}{6}$$ |
| (6) | (7) | (8) | (9) | (10) |
| $$-\sqrt{30}$$ | $$6\sqrt{6}+12$$ | $$a(1-5b)$$ | $$(5x+6)(5x-6)$$ | $$（x+5）^{2}$$ |
| (11) | (12) | (13) | (14) | (15) |
| $$(x-1)(7y-4)$$ | $$(2-5x)(2-9x)$$ | $$\left（2x-9\right）^{2}$$ | $$(2x+y+1)(2x-y-1)$$ | 13 |
| (16) | (17) | (18) | (19) | (20) |
| 12 | 10 | 4.8 (或$\frac{24}{5}$) | 5 | 2.45 |

三、計算題：10分**【需寫計算或推論過程，答案以最簡根式表示，否則不予計分】**

|  |  |
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| 1. 因式分解$ xy^{2}-2xy+x-y^{2}+2y-1$ (3分)答:=$ (xy^{2}-2xy+x)-(y^{2}-2y+1)$ (分組對了1分)=$ x(y^{2}-2y+1)-(y^{2}-2y+1)$ (再得1分)=$ \left（y-1\right）^{2}(x-1)$ (再得1分)Ans:$\left（y-1\right）^{2}(x-1)$ | G2.(1)$\overline{BF}的長是多少？$(2分)答:$\overline{FG}=5$ (1分)$\overline{BF}=\sqrt{5^{2}+12^{2}}=13$ (再得1分)Ans: 132.(2)這三項挑戰經過的距離（即$\overline{BF}、\overline{BD}、\overline{DF}$）**總共**多少？ (2分)答:$\overline{BD}=\sqrt{10^{2}+10^{2}}=10\sqrt{2}$ $\overline{DF}=\sqrt{5^{2}+10^{2}+12^{2}}=\sqrt{269}$ (算出$\overline{BD}或\overline{DF}$ 1分)$\overline{BF}+\overline{BD}+\overline{DF}=13+10\sqrt{2}+\sqrt{269}$ (再得1分)G |
| 3. 求 $\overbar{AN}$ : $\overbar{AM}$ : $\overbar{MN}$ 為何？(3分)答:$$\overbar{AM}=4$$設$\overbar{DN}=\overbar{MN}=x$，則$\overbar{AN}=8-x$在$∆AMN$中$4^{2}+(8-x)^{2}=x^{2}$ (1分)$x=5 $ (再得1分)$\overbar{AN}$ : $\overbar{AM}$ : $\overbar{MN}$ = 3 : 4 : 5 (再得1分) |