

# 2014 IMAS 第一试 (小高组) 答案

1. C

2. D

3. A

4. E

5. D

解析: 差倍问题

$$[(19+20) - (6+5)] \div (2-1) = 28$$

$$28 - 5 - 6 = 17$$

6. C

$$\text{解析: } 800x + 500y = 3400$$

$$800 \times 3 + 500 \times 2 = 3400$$

7. B

$$\text{解析: } (2+4) \div 5 = 1 \dots \dots 1$$

8. A

$$\text{解析: } 17.74.43.38.87.79.96$$

9. D

10. B

11. C

12. A

13. A

$$\text{解析: } 50 \times 4 + 12 \times 5 = 260$$

14. C

$$\text{解析: } 750 \div (0.05 \times 60 \times 60) = 4 \dots \dots 10$$

15. D

$$\text{解析: } 10^2 \pi \times 8 + \frac{1}{3} \times 10^2 \pi \times 8 = 3349.3 \text{ cm}^3$$

16. D

解析: 进: 4种; 出: 4种

$$4 \times 4 = 16 (\text{种})$$

17. A

$$\begin{aligned} \text{解析: } S_{\text{阴}} &= S_{\text{正}} + S_{\text{扇}CDD'} - S_{\text{扇}BAA'} - S_{\text{平}} \\ &= S_{\text{正}} - S_{\text{平}} \\ &= 10^2 - 10^2 \div 2 \\ &= 50 \end{aligned}$$

18. E

19. D

20. A

解析:  $\triangle BCM$  为等边三角形,  $\angle ABM = 30^\circ$

$$S_{\text{扇}} = 10^2 \pi \times \frac{30+30}{360} = \frac{50}{3} \pi \approx 52.3 \text{ cm}^2$$

21. 335

解析: 除以4的余数为

$$1 \ 1 \ 2 \ 3 \ 10 \ 11 \ 2 \ 3 \ 10 \dots\dots$$

$$2014 \div 6 = 335 \dots \dots 4$$

22. 450

$$\text{解析: } S_{\text{蔬}} = 3 \times 400 \times 3 = 3600 \text{ m}$$

$$3600 = 450 \times 8$$

23. 005

解析: 枚举法

24. 036

$$\text{解析: } 10^2 - 8^2 = 36$$



25. 106

解析: 共有  $C_{10}^2 = 153$  (种)

横连:  $5 \times 3 = 15$ , 竖连:  $2 \times 6 = 12$

对连:  $2 \times 10 = 20$ , 则  $153 - 15 - 12 - 20 = 106$