

**AMC WARM-UP PAPER
MIDDLE PRIMARY 7
SOLUTIONS**

©2009 Australian Mathematics Trust

1. $8 - 5 = 3$ so $\square = 8$,
hence (C).
2. Since it takes 3 oranges per glass, we will need $8 \times 3 = 24$ oranges,
hence (C).
3. If the students finished at 11:21 then they started at 11:06. Clock (D) is the clock showing 11:06,
hence (D).
4. Since $10 \times 32 = 320$ and we have 323 students to take to the carnival, 10 buses will leave three students, so 11 buses are needed,
hence (C).
5. Brett is 12 years old. Daina is half Brett's age so is 6 years old. Omar is 13 years older than Daina so is $6 + 13 = 19$ years old,
hence (D).
6. To get a total of 9, you can have a 6 and a 3; a 5 and a 4, a 4 and a 5 and a 3 and a 6. There is no number you can roll to add to 2 to get 9, so 2 is not possible,
hence (A).
7. Using one coin, we can make up 50 c, \$1 and \$2.
Using two coins, we can make up \$1.50, \$2.50 and \$3.
Using 3 coins will make up \$3.50.
This gives $3 + 3 + 1 = 7$ amounts, all different,
hence (D).

MP7 Solutions Page 2

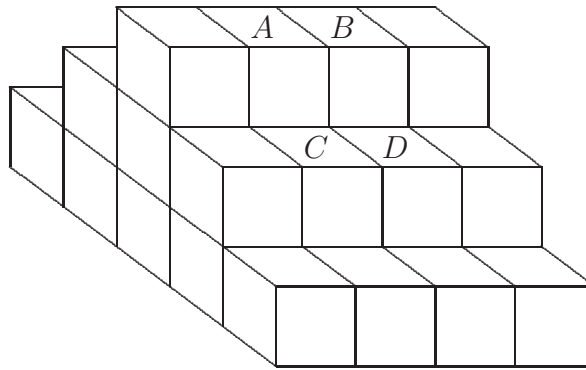
8. The rectangle has area 12 square centimetres, and so it can be $12\text{ cm} \times 1\text{ cm}$ or $6\text{ cm} \times 2\text{ cm}$ or $3\text{ cm} \times 4\text{ cm}$.

The perimeters of these rectangles are 26 cm, 16 cm and 14 cm.

The only one of these given is 26 cm,

hence (D).

9. Consider the 9 blocks to the left of A and C. These have all at least one face painted. Similarly, the 9 blocks to the right of B and D have at least one face painted. Also, the 2 blocks in front of C and D have 2 faces painted, as do the 2 blocks in a similar position at the other end.



This means that the only blocks which do not get painted are the 4 blocks under blocks A and B, the 2 blocks under C and D and the two blocks the other side of A and B in a similar position at the back to C and D.

The total number of blocks not painted is then $2 + 4 + 2 = 8$.

10. Let's say she collected 1 shell on the first day. Then, over the five days the number of shells she would have collected is

$$1 + 4 + 7 + 10 + 13 = 35.$$

This is 15 short of the 50 she did collect, so working backwards from this, she must have collected an extra $15 \div 5 = 3$ shells per day, so she must have collected 4, 7, 10, 13, 16 shells on the five days, and so 16 on the fifth day.