Easter Pick and Mix Y6
Challenge Cards - Answers

1. Egg team heat 1-3 average is 41 seconds, so in round 4, they need a 37 second run. Chicken team heat 1-3 average is 44 seconds, so in round 4, they need a sub 29 second run. Bunny team heat 1-3 average is 43 seconds, so in round 4, they need a sub 31 second run. Egg team has the best chance of reaching the final.

2. $280g \div 8 = 35g$, so less than 50g is needed.

3. No, the total number of pupils must be a multiple of 15 as the ratio 11:4 totals 15.
   $246 \div 15 = 16$ with a remainder of 6.

4. No, Ronnie cuts the cake into eighths. He must give $\frac{2}{8}$ to Zac and $\frac{6}{8}$ to Wendy if Zac gives $\frac{1}{2}$ of his share to Wendy, resulting in Wendy having $\frac{7}{8}$ of the cake.

5. A = False, B = False, C= True, D = True

6. No, Mike is not correct. If the proportion of the triangle remains the same (all sides are multiplied by two), then the angles will remain the same.

7. Yes, I can spend all of my money buying 4 small eggs and 7 medium eggs.

8. Whole numbers for both parts of this problem must be 3 (3+3=6)
   Difference: $1 - 0.36 = 0.64$. $0.64 \div 2 = 0.32$.
   The two numbers could be 3.32 and 3.68, or any two decimal numbers totalling 1 with a difference of 0.36.
   Challenge. Difference: $1 - 0.72 = 0.28$, $0.28 \div 2 = 0.14$. The two numbers could be 3.14 and 3.86 or any two decimal numbers totalling 1 with a difference of 0.72.

9. Multiple answers, examples include:
   $26 \times 8 = 52 \times 4$
   $144 \div 8 = 9 \times 2$
   $350 \div 25 = 2 \times 7$

10. Quantity | Sultanas | Eggs | Flour | Sugar
    -----|---------|------|-------|------
    6 buns | 80g     | 2    | 220g  | 145g |
    12 buns | 160g    | 4    | 440g  | 290g |
    60 buns | 800g    | 20   | 2.2kg | 1.45kg |
    90 buns | 1.2kg   | 30   | 3.3kg | 2.175kg |