

## Answer to iClicker Question 5A

- Pedigree A could be described as, “an affected father and unaffected mother have an affected son”
- Pedigree B could be described as, “two unaffected parents have an affected son”
- Pedigree C could be described as, “an affected mother and unaffected father have an affected daughter”
- Pedigree D could be described as, “an affected father and unaffected mother have an affected daughter” - THIS IS THE ONLY CORRECT ANSWER
- Pedigree E could be described as, “two unaffected parents have an affected daughter”

## Answer to iClicker Question 5B

Sarah's father must be  $X^aY$  (since he is an affected male). Sarah's mother is  $X^AX^-$  (since she is an unaffected female). Since Sarah is a female, she got an X from each of her parents. Therefore, she got an  $X^a$  from her father, so her genotype must be  $X^aX^?$ . If she got an  $X^a$  from mom, she'd be  $X^aX^a$  - an affected female, so she had to get an  $X^A$  from mom. Therefore, Sarah can only be  $X^AX^a$  - so only answer A is correct.