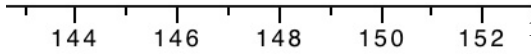
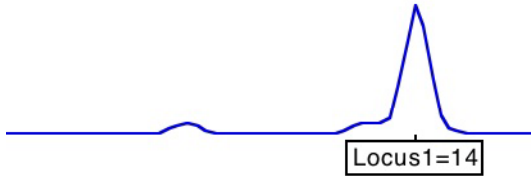


# KEY-CONSTRUCT AN UNKNOWN PROFILE- EXAMPLE- LOCUS 1

This demonstrates inheritance of a single autosomal locus, heterozygotes have 2 different alleles and homozygotes have 2 identical alleles. Try to predict the allelic values for the Unknown individual assuming a relationship of potential father.

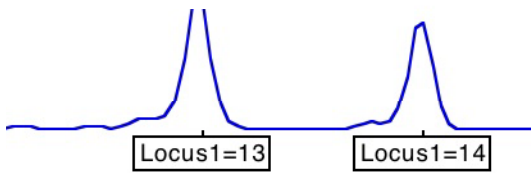


MOTHER



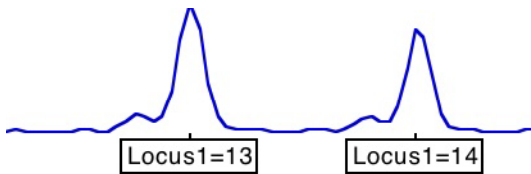
Locus 1, Allele 1, Mother	Locus 1, Allele 2, Mother
<b>14</b>	<b>14</b>

CHILD 1



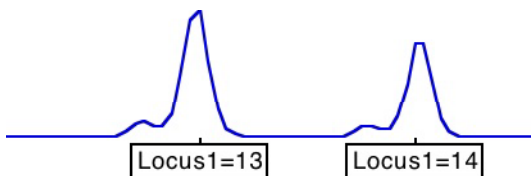
Locus 1, Allele1, Child 1	Locus 1, Allele 2, Child 1
<b>13</b>	<b>14</b>

CHILD 2



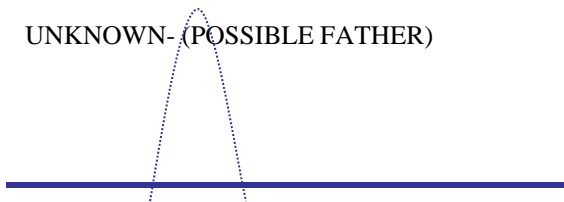
Locus 1, Allele 1, Child 2	Locus 1, Allele 2, Child 2
<b>13</b>	<b>14</b>

CHILD 3



Locus 1, Allele 1, Child 3	Locus 1, Allele 2, Child 3
<b>13</b>	<b>14</b>

UNKNOWN-(POSSIBLE FATHER)

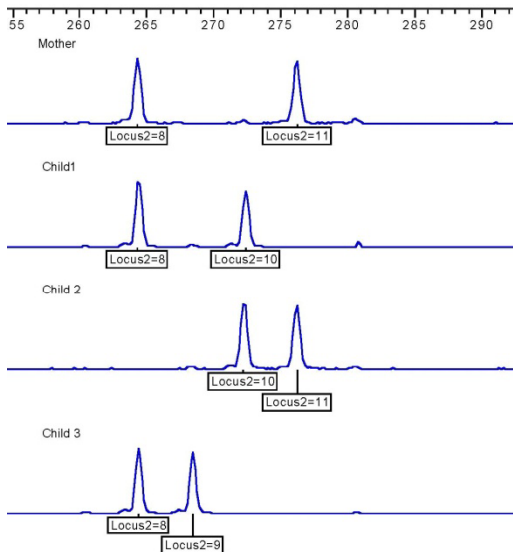


Locus 1, Allele 1, Unknown	Locus 1, Allele 2, Unknown
<b>13</b>	<b>?</b>

It may be helpful to draw where the peaks might appear in the space provided for the unknown, demonstrated with dotted line



# KEY-CONSTRUCT AN UNKNOWN PROFILE-EXERCISE, LOCI 2-3



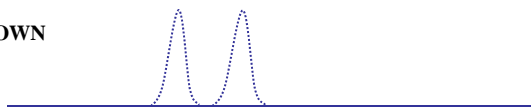
Locus 2, Allele 1-Mother	Locus 2, Allele 2-Mother
<b>8</b>	<b>11</b>

Locus 2, Allele 1-Child 1	Locus 2, Allele 2, Child 1
<b>8</b>	<b>10</b>

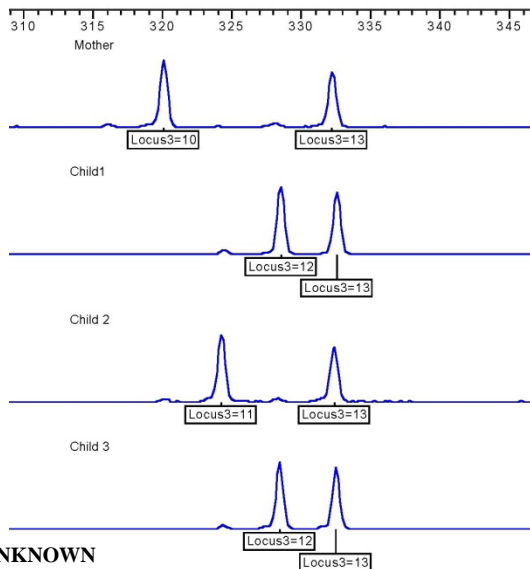
Locus 2, Allele 1, Child 2	Locus 2, Allele 2, Child 2
<b>10</b>	<b>11</b>

Locus 2, Allele 1, Child 3	Locus 2, Allele 2, Child 3
<b>8</b>	<b>9</b>

UNKNOWN



Locus 2, Allele 1, Unknown	Locus 2, Allele 2, Unknown
<b>9</b>	<b>10</b>



Locus 3, Allele1-Mother	Locus 3, Allele2-Mother
<b>10</b>	<b>13</b>

Locus 3, Allele 1-Child 1	Locus 3, Allele 2, Child 1
<b>12</b>	<b>13</b>

Locus 3, Allele 1, Child 2	Locus 3, Allele 2, Child 2
<b>11</b>	<b>13</b>

Locus 3, Allele 1, Child 3	Locus 3, Allele 2, Child 3
<b>12</b>	<b>13</b>

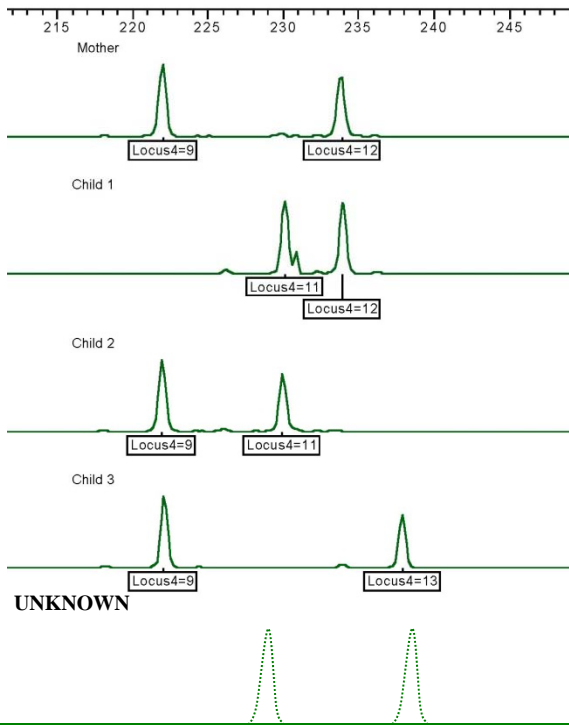
UNKNOWN



Locus 3, Allele 1, Unknown	Locus 3, Allele 2, Unknown
<b>11</b>	<b>12</b>



# KEY-CONSTRUCT AN UNKNOWN PROFILE-EXERCISE, LOCI 4-5



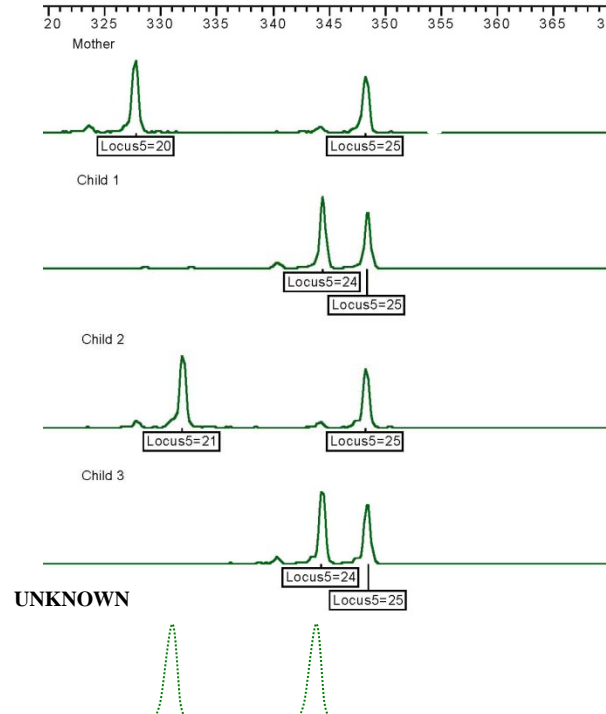
Locus 4, Allele 1-Mother	Locus4, Allele 2-Mother
<b>9</b>	<b>12</b>

Locus 4, Allele 1-Child 1	Locus 4, Allele 2, Child 1
<b>11</b>	<b>12</b>

Locus 4, Allele 1, Child 2	Locus 4, Allele 2, Child 2
<b>9</b>	<b>11</b>

Locus 4, Allele 1, Child 3	Locus 4, Allele 2, Child 3
<b>9</b>	<b>13</b>

Locus 4, Allele 1, Unknown	Locus 4, Allele 2, Unknown
<b>11</b>	<b>13</b>



Locus 5, Allele1-Mother	Locus5, Allele2-Mother
<b>20</b>	<b>25</b>

Locus 5, Allele 1-Child 1	Locus 5, Allele 2, Child 1
<b>24</b>	<b>25</b>

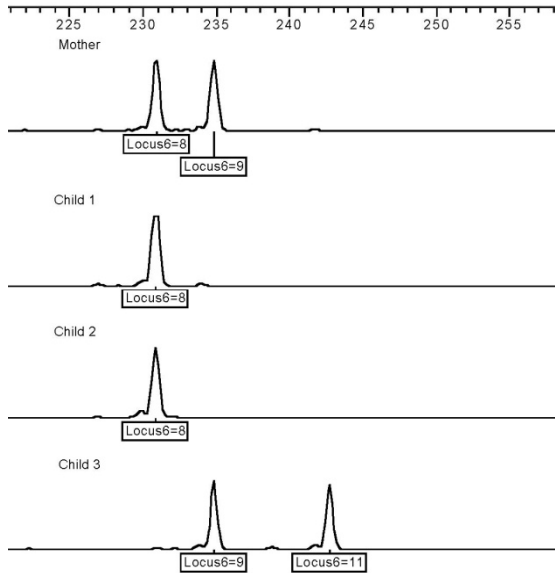
Locus 5, Allele 1, Child 2	Locus 5, Allele 2, Child 2
<b>21</b>	<b>25</b>

Locus 5, Allele 1, Child 3	Locus 5, Allele 2, Child 3
<b>24</b>	<b>25</b>

Locus 5, Allele 1, Unknown	Locus 5, Allele 2, Unknown
<b>21</b>	<b>24</b>



# KEY-CONSTRUCT AN UNKNOWN PROFILE- EXERCISE, LOCI 6-7



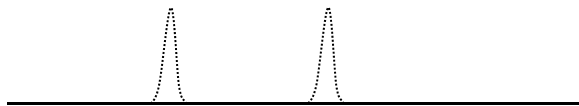
Locus 6, Allele 1, Mother	Locus 6, Allele 2, Mother
<b>8</b>	<b>9</b>

Locus 6, Allele 1, Child 1	Locus 6, Allele 2, Child 1
<b>8</b>	<b>8</b>

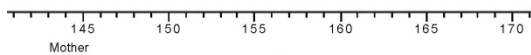
Locus 6, Allele 1, Child 2	Locus 6, Allele 2, Child 2
<b>8</b>	<b>8</b>

Locus 6, Allele 1, Child 3	Locus 6, Allele 2, Child 3
<b>9</b>	<b>11</b>

UNKNOWN



Locus 6, Allele 1, Unknown	Locus 6, Allele 2, Unknown
<b>8</b>	<b>11</b>



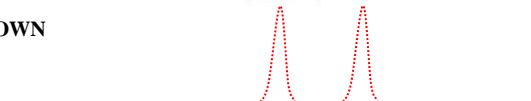
Locus 7, Allele 1, Mother	Locus 7, Allele 2, Mother
<b>11</b>	<b>12</b>

Locus 7, Allele 1, Child 1	Locus 7, Allele 2, Child 1
<b>12</b>	<b>12</b>

Locus 7, Allele 1, Child 2	Locus 7, Allele 2, Child 2
<b>12</b>	<b>13</b>

Locus 7, Allele 1, Child 3	Locus 7, Allele 2, Child 3
<b>11</b>	<b>12</b>

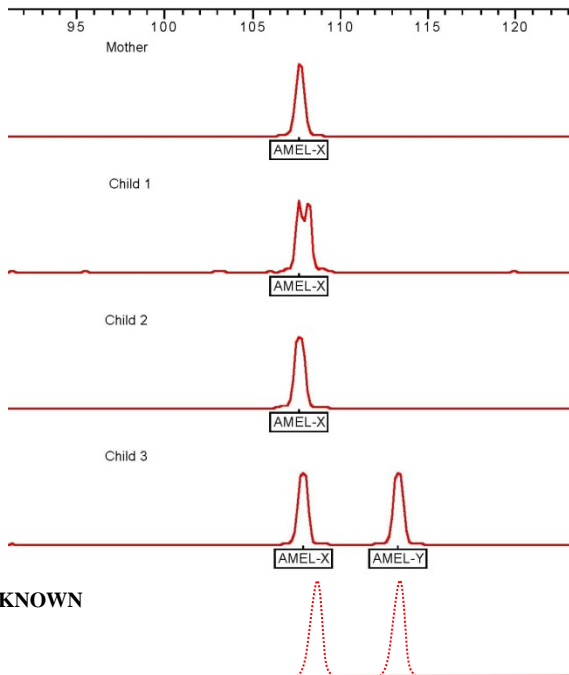
UNKNOWN



Locus 7, Allele 1, Unknown	Locus 7, Allele 2, Unknown
<b>12</b>	<b>13</b>



# KEY-CONSTRUCT AN UNKNOWN PROFILE- EXERCISE- XY MARKER, AND SUMMARY SCORE TABLE



UNKNOWN

AMEL, Allele 1, Mother	AMEL, Allele 2, Mother
<b>X</b>	<b>X</b>

AMEL, Allele 1, Child 1	AMEL, Allele 2, Child 1
<b>X</b>	<b>X</b>

AMEL, Allele 1, Child 2	AMEL, Allele 2, Child 2
<b>X</b>	<b>X</b>

AMEL, Allele 1, Child 3	AMEL, Allele 2, Child 3
<b>X</b>	<b>Y</b>

AMEL, Allele 1, Unknown	AMEL, Allele 2, Unknown
<b>X</b>	<b>Y</b>

Summary Score Table-Unknown Profile		
Locus	Allele 1	Allele 2
Locus 1	<b>13</b>	<b>?</b>
Locus 2	<b>9</b>	<b>10</b>
Locus 3	<b>11</b>	<b>12</b>
Locus 4	<b>11</b>	<b>13</b>
Locus 5	<b>21</b>	<b>24</b>
Locus 6	<b>8</b>	<b>11</b>
Locus 7	<b>12</b>	<b>13</b>
AMEL	<b>X</b>	<b>Y</b>

Refer to the example and exercises to completely fill in the summary score table to the left. Use the values from the prediction at each individual locus