**Review Questions: Simultaneous Equations**

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| 1. The lines *y* = 2*x* + 1 and *y* = *x* − 3 will both go through the point:
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|  |  |
| --- | --- |
|    | ( 1, 1) |
|    | ( 1, 3) |
|    | ( −4, −7) |
|    | ( 0, −3) |

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| 1. Match each equation on the left with its gradient and *y*-intercept form from the list on the right.

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| *Using the pull-down menus, match each item in the left column to the corresponding item in the right column.* |
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| A | *y* = 2 − *x* |
|  |
| B | $y =\frac{x}{2}$  |
|  |
| C | *y* = 2*x* |
|  |
| D | *y* = *x* + 2 |
|  |
| E | *y* = *x* − 2 |
|  |

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| **8.1***x* + *y* = 2 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **8.2***y* − *x* = 2 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **8.3***y* − *x* + 2 = 0 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **8.4**2*x* − *y* = 0 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **8.5**2*y* = *x* |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| 1. Match each pair of equations on the left with their solution from the list on the right.

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| *Using the pull-down menus, match each item in the left column to the corresponding item in the right column.* |
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| A | (3, 1) |
|  |
| B | (−2, −2) |
|  |
| C | (4, −2) |
|  |
| D | (−1, −2) |
|  |

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| **9.1***x* + *y* = 2; *y* = *x* − 6 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **9.2**2*x* − *y* = 0; *y* = *x* − 1 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **9.3***x* + 2*y* = 5; *y* = *x* − 2 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **9.4***y* − *x* = 0; *y* = 2*x* + 2 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| 1. The solution to the pair of equations *y* = 5*x* − 4 and *x* + 2*y* = 14 is …
 |
|

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| --- | --- |
|    | (6, 2) |
|    | (1, 1) |
|    | (2, 6) |
|    | (3, 11) |

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| 1. The solution to the pair of equations *x* + 3*y* − 1 and 2*x* − 3*y* = 20 is …
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| --- | --- |
|    | *x* = 10 and *y* = −3 |
|    | *x* = 4 and *y* = −1 |
|    | *x* = 1 and *y* = 0 |
|    | *x* = 7 and *y* = −2 |

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| 1. Match each pair of equations on the left with their solution from the list on the right.

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| *Using the pull-down menus, match each item in the left column to the corresponding item in the right column.* |
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| A | (3, −7) |
|  |
| B | (1, 1) |
|  |
| C | (−3, −2) |
|  |
| D | (4, −3) |
|  |

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| **14.1***x* + *y* = 2; *x* − *y* = 0 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **14.2**2*x* − 3*y* = 8; *x* + 2*y* = 1 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **14.3**3*x* − *y* = −7; *x* + 2*y* = −7 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **14.4***y* − *x* = −7; *y* + 2*x* = 5 |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| 1. The graphs of *x* + *y* = 10 and *y* = 20 cross at the point where *x* = \_\_\_\_\_.
 |
|

|  |  |
| --- | --- |
|    | −20 |
|    | 20 |
|    | −10 |
|    | 10 |

 |

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| --- |
| 1. The solution to the pair of equations 2*x* + 3*y* = 4 and 3*x* + 2*y* = 1 is ...
 |
|

|  |  |
| --- | --- |
|    | *x* = −4 and *y* = 4 |
|    | *x* = 5 and *y* = −3 |
|    | *x* = −1 and *y* = 2 |
|    | *x* = 2 and *y* = 0 |

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| 1. The width of a rectangle is 3 m less than its length. If the perimeter is 38 m, the area must be  m2.
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| 1. Match each statement about birds and goats with its correct equation.

*b* = no. of birds; *g* = no. of goats

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| *Using the pull-down menus, match each item in the left column to the corresponding item in the right column.* |
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| A | 2*b* + 4*g* = 50 |
|  |
| B | *g* − *b* = 2 |
|  |
| C | *b* = 2*g* |
|  |
| D | *b* − 2 = *g* |
|  |
| E | *b* + *g* = 50 |
|  |
| F | *b* = 2 |
|  |

 |  |
| **21.1**there is a total of 50 birds and goats in a paddock |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **21.2**there are 50 legs in the paddock of birds and goats |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **21.3**there are twice as many birds as goats |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **21.4**there are 2 more birds than goats |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **21.5**there are 2 more goats than birds |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| **21.6**there are 2 birds |  |  | G:\2015-2016\10\launch_book\cw10\uaensm10\uaensm10\media\styles\90\_skins_\A\australia_school\pixel.gif |  |
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| 1. It costs Dhs 13 for 4 apples and 2 oranges, and Dhs 21·50 for 5 apples and 6 oranges. What is the cost of one apple and one orange?
 |
|

|  |  |
| --- | --- |
|    | Dhs 3·50 |
|    | Dhs 4·00 |
|    | Dhs 4·50 |
|    | Dhs 5·00 |

 |

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| --- |
| 1. Company *A* charges Dhs 30 per month and Dhs 0·20 per minute for mobile phone calls whereas Company *B* charges Dhs 20 per month and Dhs 0·25 per minute. After how many minutes per month would the costs from the two companies be the same?
 |
|

|  |  |
| --- | --- |
|    | 100 minutes |
|    | 50 minutes |
|    | 250 minutes |
|    | 200 minutes |

 |

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| --- |
| 1. A rectangle has a perimeter of 64 cm. If the length is 6 cm more than the width, the width of the rectangle must be:
 |
|

|  |  |
| --- | --- |
|    | 13 cm |
|    | 19 cm |
|    | 26 cm |
|    | 10 cm |

 |