**Single variable substitution with multiplication**

Green

Copy and complete the table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 5g | 2g | 8g | 11g | 123g |
| g = 3 | 15 |  |  |  |  |
| g = 5 |  |  | 40 |  |  |
| g = 0 |  |  |  |  |  |
| g = 100 |  |  |  | 1100 |  |
| g = 1 |  |  |  |  | 123 |

Amber

If d = 4, find the value of:

|  |  |  |
| --- | --- | --- |
| a) 3d = | b) 5d + 1 = | c) 7d + 3 = |
| d) 100d + 10 = | e) -3d = | f) – 8d = |

Given that r = -3, find the value of:

|  |  |  |
| --- | --- | --- |
| a) 3r = | b) 5r + 1 = | c) 7r + 3 = |
| d) 100r = | e) -3r = | f) – 5r = |

Red

A taxi company uses this formula to calculate the fare for a journey:

f = 3m

Where *f* is the fare in pounds and *m* is the number of miles.

Use this formula to calculate the cost of a journey that is:

a) 5 miles b) 11 miles c) 4.5 miles

**Extension**

Below is how much three customers paid for their journey. How far did they travel?

a) £12 b) £66 c) £9633

www.mathsideas.com

**Single variable substitution with multiplication**

Green

Copy and complete the table:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | 5g | 2g | 8g | 11g | 123g |
| g = 3 | 15 | 6 | 24 | 33 | 369 |
| g = 5 | 25 | 10 | 40 | 55 | 615 |
| g = 0 | 0 | 0 | 0 | 0 | 0 |
| g = 100 | 500 | 200 | 800 | 1100 | 12300 |
| g = 1 | 5 | 2 | 8 | 11 | 123 |

Amber

If d = 4, find the value of:

|  |  |  |
| --- | --- | --- |
| a) 3d = 12 | b) 5d + 1 = 21 | c) 7d + 3 = 24 |
| d) 100d + 10 = 410 | e) -3d = -12 | f) – 8d = -32 |

Given that r = -3, find the value of:

|  |  |  |
| --- | --- | --- |
| a) 3r = -9 | b) 5r + 1 = -14 | c) 7r + 3 = -18 |
| d) 100r = -300 | e) -3r = 9 | f) – 5r = 15 |

Red

A taxi company uses this formula to calculate the fare for a journey:

f = 3m

Where *f* is the fare in pounds and *m* is the number of miles.

Use this formula to calculate the cost of a journey that is:

a) 5 miles = £15 b) 11 miles = £33 c) 4.5 miles = £13.50

**Extension**

Below is how much three customers paid for their journey. How far did they travel?

a) £12 = 4 miles b) £66 = 22 miles c) £9633 = 3211 miles

www.mathsideas.com