**Partial Fractions Codebreaker 2 - Answers**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A | B | C | D | E | F | G | H | I |
| $$\frac{3}{2}$$ | $$-2$$ | $$15$$ | $$1$$ | $$3$$ | $$5$$ | $$6$$ | $$9$$ | $$-1$$ |
|  |  |  |  |  |  |  |  |  |
| J | K | L | M | N | O | P | Q | R |
| $$-3$$ | $$-6$$ | $$-5$$ | $$\frac{1}{2}$$ | $$7$$ | $$-\frac{3}{2}$$ | $$-10$$ | $$\frac{4}{5}$$ | $$\frac{4}{3}$$ |
|  |  |  |  |  |  |  |  |  |
| S | T | U | V | W | X | Y | Z |  |
| $$8$$ | $$2$$ | $$-\frac{1}{2}$$ | $$4$$ | $$-8$$ | $$-7$$ | $$-4$$ | $$\frac{2}{3}$$ |  |

Find the missing values using partial fractions, link your answers to the table above to reveal what the dancer had for Christmas lunch:

|  |  |  |
| --- | --- | --- |
| $$\frac{9x-13}{(x-3)(2x+1)}≡\frac{A}{x-3}+\frac{B}{2x+1}$$Find $A$. | $$\frac{17-2x}{\left(2x+3\right)(x-1)}≡\frac{C}{2x+3}+\frac{D}{x-1}$$Find $C$. | $$\frac{11x+18}{(x-2)(x+3)}≡\frac{E}{x-2}+\frac{F}{x+3}$$Find $F$. |
| $$2$$ | $$-8$$ | $$3$$ |
| T | W | E |
|  |  |  |
| $$\frac{x^{2}+11x-20}{(x-3)(x-1)(x+2)}≡\frac{G}{x-3}+\frac{H}{x-1}+\frac{I}{x+2}$$Find $H$. | $$\frac{18-6x}{(x+1)(x-2)(x-1)}≡\frac{J}{x+1}+\frac{K}{x-2}+\frac{L}{x-1}$$Find $L$. | $$\frac{2x^{2}+5x+11}{(x+2)(2x+1)(x-1)}≡\frac{P}{x+2}+\frac{Q}{2x+1}+\frac{R}{x-1}$$Find $Q$. |
| $$^{4}/\_{3}$$ | $$-6$$ | $$-4$$ |
| R | K | Y |