**Partial Fractions Codebreaker 1 - Answers**

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

Find the missing values using partial fractions, link your answers to the table above to reveal the difference between a man in a suit on a unicycle and a man in jeans on a bike:

|  |  |  |
| --- | --- | --- |
| $$\frac{4x+7}{(x+1)(x+2)}≡\frac{A}{x+1}+\frac{B}{x+2}$$Find $A$. | $$\frac{x+7}{(x-1)(x+3)}≡\frac{C}{x-1}+\frac{D}{x+3}$$Find $C$. | $$\frac{5x-11}{(x+2)(x-5)}≡\frac{E}{x+2}+\frac{F}{x-5}$$Find $F$. |
| $$3$$ | $$2$$ | $$2$$ |
| A | T | T |
|  |  |  |
| $$\frac{6x+17}{(3-x)(x+4)}≡\frac{G}{3-x}+\frac{H}{x+4}$$Find $H$. | $$\frac{1}{(x-5)(x-3)}≡\frac{I}{x-5}+\frac{J}{x-3}$$Find $I$. | $$\frac{x-3}{x(x-2)}≡\frac{K}{x}+\frac{L}{x-2}$$Find $K$. |
| $$-1$$ | $$^{1}/\_{2}$$ | $$^{3}/\_{2}$$ |
| I | R | E |