Match-Up — Method of Differences

1	$\sum_{r=1}^{n} \frac{1}{r(r+1)}$
2	$\sum_{r=1}^{n} \frac{1}{(r+1)(r+2)}$
3	$\sum_{r=1}^{n} \frac{2}{r(r+2)}$
4	$\sum_{r=1}^{n} \frac{1}{(r+4)(r+5)}$
5	$\sum_{r=1}^{n} \frac{2}{(r+1)(r+3)}$

6	$\sum_{r=1}^{n} \frac{1}{r^2+5r+6}$
7	$\sum_{r=5}^{n} \frac{2}{r^2+2r}$
8	$\sum_{r=2}^{n} \frac{2}{r^2-1}$
9	$\sum_{r=6}^{n} \frac{1}{(r+3)(r+4)}$
10	$\sum_{r=1}^{n} \frac{4}{4r^2+12r+5}$

A	$\frac{n(3n+5)}{2(n+1)(n+2)}$
B	$\frac{4n(8n+17)}{15(2n+3)(2n+5)}$
C	$\frac{n}{2(n+2)}$
D	$\frac{n-5}{9(n+4)}$
E	$\frac{(3n+2)(n-1)}{2n(n+1)}$

F	$\frac{n}{3(n+3)}$
G	$\frac{n}{n+1}$
H	$\frac{(11n+17)(n-4)}{30(n+1)(n+2)}$
I	$\frac{n(5n+13)}{6(n+2)(n+3)}$
J	$\frac{n}{5(n+5)}$

1	2	3	4	5	6	7	8	9	10