$$\frac{\frac{7 f}{f^2 - 9} + \frac{f + 2}{6 f - 18}}{\frac{f^2 - 6 f + 6}{f^2 - 9}}$$

أجد ناتج ما يأتي واكتبه في أبسط صورة: 4٠

## الحل:

$$\frac{7 f}{f^2-9} + \frac{f+2}{6 f-18} = \frac{7 f}{(f-3) (f+3)} + \frac{f+2}{6 (f-3)}$$

$$\frac{7 f}{f^2-9} + \frac{f+2}{6 f-18} = 6 (f-3) (f+3)$$

$$= \frac{6(7 f)}{6(f-3)(f+3)} + \frac{(f+2)(f+3)}{6(f-3)(f+3)}$$
42 f  $f^2 + 5f + 6$ 

$$= \frac{42 f}{6 (f-3) (f+3)} + \frac{f^2+5 f+6}{6 (f-3) (f+3)}$$
$$= \frac{42 f+f^2+5 f+6}{6 (f-3) (f+3)}$$

$$= \frac{42 f + f^2 + 5 f + 6}{6 (f - 3) (f + 3)}$$
$$= \frac{f^2 + 47 f + 6}{3}$$

 $6 f^2 - 54$