

Egyptian Multiplication

$$\textcircled{37} * 62$$

1	62	*
2	124	
4	248	*
8	496	
16	992	
32	1984	*

Answers over here!

$$\begin{array}{r} 1984 \\ 248 \\ 62 \\ \hline 2294 \end{array}$$

✓

37 = 32 + 4 + 1
 Fermat's Trick

check w/ calculator!

Egyptian Division

$$\frac{6}{11} = ?$$

$$\frac{6}{11} = \frac{5 + \frac{1}{2} + \frac{1}{2}}{11} = \frac{5 + \frac{1}{2}}{11} + \frac{\frac{1}{2}}{11}$$

$$= \frac{1}{2} + \frac{\frac{1}{2}}{11} = \frac{1}{2} + \frac{1}{22}$$

$$= \left[\frac{1}{2} + \frac{1}{22} \right] \checkmark$$

$$\frac{6}{11} = \frac{4+2}{11} = \frac{4}{11} + \frac{2}{11}$$

$$= 2 \cdot \frac{2}{11} + \frac{2}{11}$$

$$= 2 \left(\frac{1}{6} + \frac{1}{66} \right) + \left(\frac{1}{6} + \frac{1}{66} \right)$$

$$= \frac{1}{3} + \frac{1}{33} + \frac{1}{6} + \frac{1}{66}$$

$$= \frac{1}{3} + \frac{1}{6} + \frac{1}{33} + \frac{1}{66}$$

$\frac{6}{11} = ?$
 Answer
 over here!

$$? = \frac{1}{2} + \frac{1}{22}$$

1	11
$\frac{1}{2}$	$5 + \frac{1}{2}$ ✗
$\frac{1}{11}$	1
$\frac{1}{22}$	$\frac{1}{2}$ ✗

$$6 = 11 \cdot ?$$

$$\begin{array}{c}
 6 \\
 / \\
 5 + \frac{1}{2} \checkmark \quad \frac{1}{2} \checkmark
 \end{array}$$

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