

1) $x^2 - 10x + 21$

$(x - 3)(x - 7)$

$$\begin{array}{r} 21 \\ \hline 1 \quad 21 \\ -3 \quad -7 \end{array}$$

6) $x^2 + 2x - 35$

$(x - 5)(x + 7)$

$$\begin{array}{r} 35 \\ \hline 1 \quad 35 \\ -5 \quad +7 \end{array}$$

2) $x^2 + 8x - 48$

$(x - 4)(x + 12)$

$$\begin{array}{r} 48 \\ \hline 1 \quad 48 \\ 2 \quad 24 \\ 3 \quad 16 \\ -4 \quad +12 \\ 6 \quad 8 \end{array}$$

7) $v^2 - 15v + 26$

$(v - 2)(v - 13)$

$$\begin{array}{r} 26 \\ \hline 1 \quad 26 \\ -2 \quad -13 \end{array}$$

3) $r^2 + 15r + 36$

$(r + 3)(r + 12)$

$$\begin{array}{r} 36 \\ \hline 1 \quad 36 \\ 2 \quad 18 \\ +3 \quad +12 \\ 4 \quad 9 \end{array}$$

8) $x^2 - 6x - 16$

$(x + 2)(x - 8)$

$$\begin{array}{r} 16 \\ \hline 1 \quad 16 \\ +2 \quad -8 \\ 4 \quad 4 \end{array}$$

4) $x^2 - 12x - 45$

$(x + 3)(x - 15)$

$$\begin{array}{r} 45 \\ \hline 1 \quad 45 \\ +3 \quad -15 \\ 5 \quad 9 \end{array}$$

9) $t^2 + 27t - 50$

Prime

$$\begin{array}{r} 50 \\ \hline 1 \quad 50 \\ 2 \quad 25 \\ 5 \quad 10 \end{array}$$

5) $a^2 - 18a + 40$

Prime

$$\begin{array}{r} 40 \\ \hline 1 \quad 40 \\ 2 \quad 20 \\ 4 \quad 10 \\ 5 \quad 8 \end{array}$$

10) $x^2 - 9x + 8$

$(x - 1)(x - 8)$

$$\begin{array}{r} 8 \\ \hline -1 \quad -8 \\ 2 \quad 4 \end{array}$$

11) $s^2 + 19s + 70$ ↙ sum ↘

$(s + 5)(s + 14)$

70
~~1 70~~
~~2 35~~
~~+5 +14~~
~~7 10~~

16) $x^2 - 2x - 63$ ↙ diff ↘

$(x + 7)(x - 9)$

63
~~1 63~~
~~3 21~~
~~+7 -9~~

12) $x^2 - 10x - 21$ ↙ diff ↘

Prime

21
~~1 21~~
~~3 7~~

17) $r^2 + 11r - 80$ ↙ diff ↘

$(r - 5)(r + 16)$

80
~~1 80~~
~~2 40~~
~~4 20~~
~~-5 +16~~
~~8 10~~

13) $x^2 - 14x + 48$ ↙ sum ↘

$(x - 6)(x - 8)$

48
~~1 48~~
~~2 24~~
~~3 16~~
~~4 12~~
~~-6 -8~~

18) $x^2 - 13x + 42$ ↙ sum ↘

$(x - 6)(x - 7)$

42
~~1 42~~
~~2 21~~
~~3 14~~
~~-6 -7~~

14) $k^2 + 5k - 36$ ↙ diff ↘

$(k - 4)(k + 9)$

36
~~1 36~~
~~2 18~~
~~3 12~~
~~-4 +9~~

19) $x^2 + 5x + 24$ ↙ sum ↘

Prime

24
~~1 24~~
~~2 12~~
~~3 8~~
~~4 6~~

15) $x^2 - 19x + 60$ ↙ sum ↘

$(x - 4)(x - 15)$

60
~~1 60~~
~~2 30~~
~~3 20~~
~~-4 -15~~
~~5 12~~
~~6 10~~

20) $v^2 + 6v - 55$ ↙ diff ↘

$(v - 5)(v + 11)$

55
~~1 55~~
~~-5 +11~~