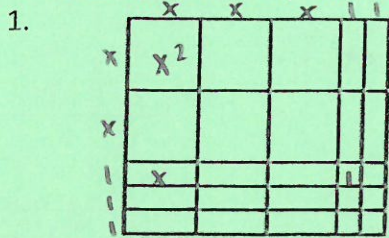
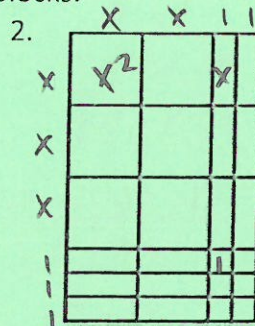


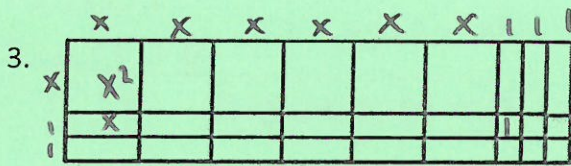
Write 2 equivalent expressions for the area of the blocks.



$$(3x+2)(2x+3) = 6x^2 + 13x + 6$$



$$(2x+2)(3x+3) = 6x^2 + 12x + 6$$



$$(x+2)(6x+3) = 6x^2 + 15x + 6$$

NOT ON TEST

Factor out the GCF, then factor the remaining trinomial.

4.  $\frac{3x^2}{3} + \frac{3x}{3} - \frac{18}{3} = 3(x^2 + x - 6) = 3(x+3)(x-2)$

$$\frac{a \cdot c = -6}{b = 1} \begin{array}{|l} 3 \cdot -2 \\ +1 \end{array}$$

5.  $\frac{2x^2}{2} + \frac{14x}{2} + \frac{24}{2} = 2(x^2 + 7x + 12) = 2(x+3)(x+4)$

$$\frac{a \cdot c = 12}{b = 7} \begin{array}{|l} 3 \cdot 4 \\ 7 \end{array}$$

6.  $\frac{4x^2}{4} - \frac{100}{4} = 4(x^2 - 25) = 4(x+5)(x-5)$

$$\frac{a \cdot c = -25}{b = 0} \begin{array}{|l} -5 \cdot 5 \\ 0 \end{array}$$

7.  $\frac{5x^2}{5} - \frac{25x}{5} - \frac{30}{5} = 5(x^2 - 5x - 6) = 5(x-6)(x+1)$

$$\frac{a \cdot c = -6}{b = -5} \begin{array}{|l} -6 \cdot 1 \\ -5 \end{array}$$

8.  $\frac{2x^2}{2} + \frac{16x}{2} + \frac{24}{2} = 2(x^2 + 8x + 12) = 2(x+2)(x+6)$

$$\frac{a \cdot c = 12}{b = 8} \begin{array}{|l} 2 \cdot 6 \\ 8 \end{array}$$

9.  $\frac{3x^2}{3} - \frac{12}{3} = 3(x^2 - 4) = 3(x+2)(x-2)$

$$\frac{a \cdot c = -4}{b = 0} \begin{array}{|l} -2 \cdot 2 \\ 0 \end{array}$$



Factor the following quadratic expressions.

10.  $2x^2 + 7x + 5$

$$\begin{array}{c|c} a \cdot c = 10 & b = 7 \\ \hline 2 \cdot 5 & 7 \end{array}$$

2x	5	
x	$2x^2$ 5x	
1	2x	5

$(2x+5)(x+1)$

12.  $3x^2 + 5x + 2$

$$\begin{array}{c|c} a \cdot c = 6 & b = 5 \\ \hline 2 \cdot 3 & 5 \end{array}$$

3x	2	
x	$3x^2$ 2x	
1	3x	2

$(3x+2)(x+1)$

14.  $2x^2 - 9x + 10$

$$\begin{array}{c|c} a \cdot c = 20 & b = -9 \\ \hline -4 \cdot -5 & -9 \end{array}$$

x	-2	
2x	$2x^2$ -4x	
-5	-5x	10

$(2x-5)(x-2)$

16.  $5x^2 - 31x + 6$

$$\begin{array}{c|c} a \cdot c = 30 & b = -31 \\ \hline -30 \cdot -1 & -31 \end{array}$$

x	-6	
5x	$5x^2$ -30x	
-1	-1x	6

$(5x-1)(x-6)$

18.  $4x^2 + 7x - 2$

$$\begin{array}{c|c} a \cdot c = -8 & b = 7 \\ \hline 8 \cdot -1 & 7 \end{array}$$

4x	-1	
1x	$4x^2$ -1x	
2	8x	-2

$(x+2)(4x-1)$

20.  $6x^2 + 17x - 3$

$$\begin{array}{c|c} a \cdot c = -18 & b = 17 \\ \hline 18 \cdot -1 & 17 \end{array}$$

x	3	
6x	$6x^2$ 18x	
-1	-1x	-3

$(6x-1)(x+3)$

22.  $2x^2 - x - 15$

$$\begin{array}{c|c} a \cdot c = -30 & b = -1 \\ \hline -6 \cdot 5 & -1 \end{array}$$

x	-3	
2x	$2x^2$ -6x	
5	5x	-15

$(2x+5)(x-3)$

11.  $2x^2 + 11x + 5$

$$\begin{array}{c|c} a \cdot c = 10 & b = 11 \\ \hline 10 \cdot 1 & 11 \end{array}$$

x	5	
2x	$2x^2$ 10x	
1	1x	5

$(x+5)(2x+1)$

13.  $3x^2 + 7x + 2$

$$\begin{array}{c|c} a \cdot c = 6 & b = 7 \\ \hline 6 \cdot 1 & 7 \end{array}$$

3x	1	
x	$3x^2$ 1x	
2	6x	2

$(3x+1)(x+2)$

15.  $2x^2 - 12x + 5$

$$\begin{array}{c|c} a \cdot c = 10 & b = -12 \\ \hline -1 \cdot -10 & -11 \\ -2 \cdot -5 & -7 \end{array}$$

not factorable

17.  $5x^2 - 11x + 6$

$$\begin{array}{c|c} a \cdot c = 30 & b = -11 \\ \hline -5 \cdot -6 & -11 \end{array}$$

x	-1	
5x	$5x^2$ -5x	
-6	-6x	6

$(x-1)(5x-6)$

19.  $6x^2 + 7x - 3$

$$\begin{array}{c|c} a \cdot c = -18 & b = 7 \\ \hline 9 \cdot -2 & 7 \end{array}$$

2x	3	
3x	$6x^2$ 9x	
-1	-2x	-3

$(3x-1)(2x+3)$

21.  $2x^2 - 7x - 15$

$$\begin{array}{c|c} a \cdot c = -30 & b = -7 \\ \hline -10 \cdot 3 & -7 \end{array}$$

x	-5	
2x	$2x^2$ -10x	
3	3x	-15

$(2x+3)(x-5)$

23.  $4x^2 - x - 3$

$$\begin{array}{c|c} a \cdot c = -12 & b = -1 \\ \hline -4 \cdot 3 & -1 \end{array}$$

x	-1	
4x	$4x^2$ -4x	
3	3x	-3

$(4x+3)(x-1)$