

Factoring Quadratics Mystery Picture | a>

Name _____

K	K	K	K	K	K	K	K	K	K	B	B	B	B	B	T	T	T	T	T	T	K	K	T	T
K	K	T	T	K	T	T	K	M	M	P	P	P	P	P	G	G	T	T	T	T	K	K	T	T
K	K	T	K	K	T	K	M	P	P	P	I	L	L	L	L	L	G	K	K	T	K	K	T	K
K	K	T	K	K	K	M	F	P	P	P	I	I	I	L	I	I	P	G	T	T	K	K	T	T
K	K	T	K	M	C	M	F	M	E		O	O	O		E	G	P	G	C	D	K	K	T	K
K	K	T	K	M	C	M	F	M	G	G	G	G	G	G	G	G	I	G	C	D	K	K	T	K
K	K	T	T	K	B	M	F	F	F	P	L	L	I	I	F	P	I	G	D	T	K	K	T	T
K	K	T	K	K	K	M	F	F	F	P	M	M	J	L	L	P	I	G	D	T	K	K	T	K
K	K	T	K	T	K	K	R	F	F	P	L	L	F	F	F	P	R	K	T	T	K	K	T	K
K	K	T	T	K	K	K	R	R	R	R	R	R	R	R	R	R	T	K	T	T	K	K	T	K
K	K	T	T	T	K	K	B	L	R	I	L	L	L	L	D	F	M	K	T	K	T	K	T	K
K	K	T	K	K	K	B	L	B	R	I	C	D	K	L	D	B	F	M	T	K	T	K	T	T
K	K	T	T	K	B	L	B	K	R	F	I	L	I	I	D	T	G	F	M	T	K	K	T	K
K	K	T	K	K	B	B	B	K	R	F	I	L	I	I	D	T	G	F	G	K	T	T	K	T
K	K	T	K	K	B	K	B	K	T	B	B	J	J	J	T	T	B	T	G	K	T	K	K	T
K	K	T	T	K	K	K	K	K	R	F	F	F	F	F	D	T	K	T	T	K	T	T	K	T
K	K	T	K	T	T	T	K	K	R	P	P	R	L	L	D	T	K	T	K	K	T	K	K	T
K	K	T	K	T	T	K	K	R	F	F	R	T	R	F	F	D	K	T	K	K	T	K	K	T

For problems 1-15, factor the quadratic equation on the next page. Then match the solutions to the color code to unlock the mystery image in the grid. For example, a color code of purple A means to color all blocks labeled A purple. Be careful, some of the answer choices are not used.

Green B $(3x + 1)(x + 5)$	Black B $(3x + 1)(x + 2)$	Red C $(x - 1)(7x - 2)$	Black D $(3x + 1)(2x + 1)$	Yellow E $(x - 1)(8x - 1)$
Gray F $3(x + 2)(2x - 1)$	Black G $(3x - 1)(x - 5)$	Blue J $2(x - 7)(2x - 1)$	Gray I $(3x - 1)(x + 5)$	Black J $2(x + 7)(2x + 1)$
Blue K $(5x + 6)(x + 1)$	Gray L $(x + 2)(2x + 1)$	Black M $(3x + 1)(x - 5)$	Red B $(3x - 1)(x + 6)$	Yellow O $(5x + 1)(2x + 3)$
Gray P $(3x - 1)(x + 1)$	Orange G $3(x + 2)(2x + 1)$	Black R $(x - 2)(7x + 1)$	Gray T $2(x + 7)(2x - 1)$	Blue T $(3x - 1)(3x - 2)$

Don't forget to
check for a GCF!
2 problems have
them!

Factoring Quadratics Mystery Picture I Student Work

Name _____

1. $3x^2 + 7x + 2$

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

3. $3x^2 - 16x + 5$

4. $7x^2 - 9x + 2$

5. $8x^2 - 9x + 1$

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

7. $6x^2 + 9x - 6$

8. $3x^2 - 14x - 5$

9. $4x^2 + 30x + 14$

10. $3x^2 + 14x - 5$

11. $3x^2 + 2x - 1$

12. $6x^2 + 5x + 1$

13. $10x^2 + 17x + 3$

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

15. $7x^2 - 13x - 2$

Factoring Quadratics Mystery Picture | a>

Name _____

K	K	K	K	K	K	K	K	K	K	K	B	B	B	B	B	T	T	T	T	T	T	K	K	T	T	
K	K	T	T	K	T	T	K	M	M	P	P	P	P	P	P	G	G	T	T	T	T	T	K	K	T	T
K	K	T	K	K	T	K	M	P	P	P	P	I	L	L	L	L	L	G	K	K	T	K	K	T	K	
K	K	T	K	K	K	M	F	P	P	P	P	I	I	I	L	I	I	P	G	T	T	K	K	T	T	
K	K	T	K	M	C	M	F	M	E	O	O	O	E	G	P	G	C	D	K	K	T	K	K	T	K	
K	K	T	K	M	C	M	F	M	G	G	G	G	G	G	G	G	C	D	K	K	T	K	K	T	K	
K	K	T	T	K	B	M	F	F	F	P	L	L	I	I	F	P	G	D	K	K	T	T	K	K	T	T
K	K	T	K	K	K	M	F	F	F	P	M	M	J	L	L	P	G	D	K	K	T	K	K	T	K	
K	K	T	K	T	K	K	R	F	F	P	L	L	F	F	F	P	R	K	T	T	K	K	T	T	K	K
K	K	T	T	T	K	K	B	L	R	R	R	R	R	R	R	R	R	T	K	T	T	K	K	T	K	K
K	K	T	T	T	K	K	B	L	R	R	R	R	R	R	R	R	R	T	K	T	T	K	K	T	K	K
K	K	T	K	K	K	B	L	B	R	I	C	D	K	L	D	B	F	M	T	K	T	K	T	K	K	T
K	K	T	K	K	B	L	B	K	R	I	G	E	J	L	D	T	G	F	M	T	K	K	T	K	K	T
K	K	T	T	K	B	L	B	K	R	F	I	L	I	I	D	T	G	F	M	T	K	K	T	K	K	T
K	K	T	K	K	B	B	B	K	R	F	I	L	I	I	D	T	G	F	M	T	K	K	T	K	K	T
K	K	T	K	K	B	K	B	K	T	B	B	J	J	J	T	T	B	T	G	K	T	K	K	T	K	K
K	K	T	T	K	K	K	K	K	R	F	F	F	F	F	D	T	K	T	T	K	T	T	K	T	K	T
K	K	T	K	T	T	T	K	K	R	P	P	R	L	L	D	T	K	T	K	K	T	K	K	T	K	T
K	K	T	K	T	T	K	K	R	F	F	R	T	R	F	F	D	K	T	K	K	T	K	K	T	K	T

For problems 1-15, factor the quadratic equation on the next page. Then match the solutions to the color code to unlock the mystery image in the grid. For example, a color code of purple A means to color all blocks labeled A purple. Be careful, some of the answer choices are not used.

Green B $(3x + 1)(x + 5)$	Black B $(3x + 1)(x + 2)$ ✓	Red C $(x - 1)(7x - 2)$ ✓	Black D $(3x + 1)(2x + 1)$ ←	Yellow E $(x - 1)(8x - 1)$ ✓
Gray F $3(x + 2)(2x - 1)$	Black G $(3x - 1)(x - 5)$ ✓	Blue J $2(x - 7)(2x - 1)$	Gray I $(3x - 1)(x + 5)$ ←	Black J $2(x + 7)(2x + 1)$ ✓ ←
Blue K $(5x + 6)(x + 1)$ ✓	Gray L $(x + 2)(2x + 1)$ ✓	Black M $(3x + 1)(x - 5)$ ✓	Red B $(3x - 1)(x + 6)$	Yellow O $(5x + 1)(2x + 3)$ ←
Gray P $(3x - 1)(x + 1)$ ←	Orange G $3(x + 2)(2x + 1)$	Black R $(x - 2)(7x + 1)$ ✗	Gray T $2(x + 7)(2x - 1)$	Blue T $(3x - 1)(3x - 2)$ ✗

Don't forget to check for a GCF! 2 problems have them!

Factoring Quadratics Mystery Picture | Student Work

Name _____

1. $3x^2 + 7x + 2$

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

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

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

	x	2
2x	$2x^2$	$4x$
1	x	2

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

3. $3x^2 - 16x + 5$

	x	-5
3x	$3x^2$	$-15x$
-1	$-1x$	5

$(3x-1)(x-5)$

4. $7x^2 - 9x + 2$

	x	-1
7x	$7x^2$	$-7x$
-2	$-2x$	2

$(7x-2)(x-1)$

5. $8x^2 - 9x + 1$

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

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

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

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

$(5x+6)(x+1)$

30 11
3 10
15 2
6 5

7. $6x^2 + 9x - 6$

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

	x	2
	x^2	
		-2

8. $3x^2 - 14x - 5$

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

$(3x+1)(x-5)$

9. $4x^2 + 30x + 14$

$2(2x^2 + 15x + 7)$

	x	7
2x	$2x^2$	$14x$
1	x	7

$2(2x+1)(x+7)$

14 4
5 6
8 7
2 2 8

10. $3x^2 + 14x - 5$

	x	5
3x	$3x^2$	$15x$
-1	$-1x$	-5

$(3x-1)(x+5)$

11. $3x^2 + 2x - 1$

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

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

12. $6x^2 + 5x + 1$

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

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

13. $10x^2 + 17x + 3$

	2x	3
5x	$10x^2$	$15x$
1	$2x$	3

$(5x+1)(2x+3)$

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

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

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

15. $7x^2 - 13x - 2$

	x	-2
7x	$7x^2$	$-14x$
1	x	-2

$(7x+1)(x-2)$