



Factor trinomials with a non-unit leading coefficient

1

Which pair of integers add to 15 and multiply to 54?

$$x^2 + 15x + 54 \\ = (x + a)(x + b)$$

A 7, 12

B 6, 9

C 4, 7

D 10, 10

E 5, 4

F 8, 6

2

Which pair of integers add to 0 and multiply to -16?

$$x^2 + 0x + -16 \\ = (x + a)(x + b)$$

A -5, 0

B -6, 4

C -7, -1

D -5, 1

E -4, 4

F -3, 5

3

Which answer is the same expression as this

$$(m + 4)(m - 7)$$

A

$$m^2 + 28m - 28$$

B

$$m^2 - 3m - 28$$

4

Which answer is the same expression as this

$$w^2 + 15w + 56$$

A

$$(56w + 8)(w - 7)$$

B

$$(w + 8)(w + 7)$$

5

Split the 'y' terms into terms that add to the middle coefficient and multiply to (first * last) coefficients

$$15y^2 + 22y + 8$$

A $15y^2 - 12y - 10y + 8$

B $15y^2 + 12y + 8y + 10$

C $15y^2 + 12y - 10y + 8$

D $15y^2 + 12y + 10y + 8$

E $12y^2 + 15y + 10y + 8$

6

Find common factors of the first 2 and last 2 terms

$$14x^2 + 21x - 18x - 27$$

A $7x(2x + 9) - 3(2x + 9)$

B $7x(2x + 3) - 9(2x + 3)$

C $2x(7x + 3) - 9(7x + 3)$

D $7x(2x - 3) - 9(2x - 3)$

E $7x(2x + 3) + 9(2x + 3)$

7

Find common factors of the first 2 and last 2 terms, and solve.

$$20p^2 + 45p - 24p - 54$$

A $(5p - 9)(54p + 6)$

B $(5p + 9)(54p - 6)$

C $(4p - 9)(p + 6)$

D $(4p + 9)(5p - 6)$

E $(p - 9)(21p + 6)$

8

Which answer is the same expression as this

$$21y^2 + 23y + 6$$

A

$$(7y + 3)(3y + 2)$$

B

$$(3y - 3)(6y + 2)$$

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Which answer is the same expression as this

$$6t^2 + 29t + 28$$

A

$$(2t + 7)(3t + 4)$$

B

$$(2t + 7)(t + 4)$$

10

Which answer is the same expression as this

$$3m^2 + 11m + 6$$

A

$$(m + 3)(3m + 2)$$

B

$$(11m + 3)(4m + 2)$$

11

Which answer is the same expression as this

$$7w^2 + 20w + 12$$

A

$$(20w - 2)(2w + 6)$$

B

$$(w + 2)(7w + 6)$$

12

Which answer is the same expression as this

$$2p^2 + 9p + 10$$

A

$$(2p + 2)(p + 5)$$

B

$$(p + 2)(2p + 5)$$