

Practice

Factor completely.

10. $12x^2 - 3$

11. $45x^2 + 10x$

ACF=2

12. $8x^2 - 24x + 18$

13. $x^2 + 5x + 4$

$2(4x^2 - 12x + 9)$

$2(2x - 3)^2$

Sum 5 | prod. 4

1+4 | 1·4

14. $6x^2 + 13x - 5$

Sum 13 | prod. -30

15+2 | 15·-2

1 4

$(1x + 1)(1x + 4)$

$\frac{5}{2} = \frac{15}{6} = \frac{-2}{4} = \frac{-1}{3}$

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

Answers

Factor completely.

10. $12x^2 - 3$

11. $45x^2 + 10x$

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

$5x(9x + 2)$

12. $8x^2 - 24x + 18$

13. $x^2 + 5x + 4$

$2(2x - 3)^2$

$(x + 1)(x + 4)$

14. $6x^2 + 13x - 5$

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

Practice

Solve by factoring.

15. $4x^2 = 24x$
 $4x^2 - 24x = 0$
 $4x(x - 6) = 0$
 $4x = 0$ or $x - 6 = 0$
 $x = 0$ or $x = 6$

16. $16x^2 - 361 = 0$
 $(4x - 19)(4x + 19) = 0$
 $4x - 19 = 0$ or $4x + 19 = 0$
 $4x = 19$ or $4x = -19$
 $x = 19/4$ or $x = -19/4$

17. $20x = 25x^2 + 4$
 $25x^2 - 20x + 4 = 0$
 $(5x - 2)^2 = 0$
 $5x - 2 = 0$
 $5x = 2$
 $x = 2/5$

18. $2x^2 + 7x - 15 = 0$

sum 7	prod. -30	5	10	-3
10 + -3	10 · -3	1	2	2

 $(1x + 5)(2x - 3) = 0$
 $x + 5 = 0$ or $2x - 3 = 0$
 $x = -5$ or $x = 3/2$

Answers

Solve by factoring.

15. $4x^2 = 24x$
 $x = 0, 6$

16. $16x^2 - 361 = 0$
 $x = \pm 19/4$

17. $20x = 25x^2 + 4$
 $x = 2/5$

18. $2x^2 + 7x - 15 = 0$
 $x = -5, 3/2$