

www.alvarezmathhelp.com**MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.****Factor the binomial completely.**

- 1) $81x^2 - 49$ 1) _____
 A) $(9x - 7)^2$ B) prime C) $(9x + 7)^2$ D) $(9x + 7)(9x - 7)$

Objective: (13.5) Factor the difference of two squares.
 m77-12 m57-10 m53-6 m50-1

Solve the equation.

- 2) $(2x + 1)(5x - 3) = 0$ 2) _____
 A) $\frac{1}{2}, -\frac{3}{5}$ B) $-\frac{1}{2}, \frac{3}{5}$ C) 1, 2 D) $2, \frac{5}{3}$

Objective: (13.6) Solve quadratic equations by factoring.
 m77-13 m57-11 m53-7 m50-2

- 3) $x^2 + 2x - 80 = 0$ 3) _____
 A) -10, 8 B) 10, 8 C) -10, 1 D) 10, -8

Objective: (13.6) Solve quadratic equations by factoring.
 m77-16 m57-11 m53-7 m50-3

- 4) $x^2 - 7x - 18 = 0$ 4) _____
 A) 9, -2 B) -9, 2 C) -9, -2 D) -18, 0

Objective: (13.6) Solve quadratic equations by factoring.
 m77-15 m57-13 m53-7 m50-4

- 5) $x^2 - x = 72$ 5) _____
 A) -8, 9 B) 8, 9 C) 1, 72 D) -8, -9

Objective: (13.6) Solve quadratic equations by factoring.
 m77-18 m57-13 m53-9 m50-5

- 6) $x^2 + 3x = 28$ 6) _____
 A) -7, 4 B) 7, 4 C) -7, 1 D) 7, -4

Objective: (13.6) Solve quadratic equations by factoring.
 m77-18 m57-13 m53-9 m101-32 m50-6

- 7) $2x^2 - 7x - 9 = 0$ 7) _____
 A) $\frac{9}{2}, -1$ B) $\frac{2}{9}, -1$ C) $\frac{2}{9}, 1$ D) $\frac{2}{9}, 0$

Objective: (13.6) Solve quadratic equations by factoring.
 M77-22 M57-18 m53-14 m50-7

- 8) $15x^2 - 8x = 0$ 8) _____
 A) $\frac{8}{15}, 0$ B) $\frac{15}{8}, 0$ C) $-\frac{8}{15}, 0$ D) $-\frac{15}{8}, 0$

Objective: (13.6) Solve quadratic equations by factoring.
 M77- 26 M57-12 m53-8 m50-8

9) $9x^2 - 16 = 0$ 9) _____
 A) $\frac{4}{3}, -\frac{4}{3}$ B) $\frac{4}{3}$ C) $-\frac{4}{3}$ D) $\frac{4}{3}, -\frac{4}{3}, 0$

Objective: (13.6) Solve quadratic equations by factoring.
 M77-27 M57-15 m53-11 m50-9

10) $3x^2 + 21x + 36 = 0$ 10) _____
 A) $-4, -3$ B) $-\frac{1}{2}, \frac{1}{2}$ C) $3, 4$ D) $7, 8$

Objective: (13.6) Solve quadratic equations by factoring.
 M77-31 M57-14 m53-10 m50-10

11) $15x^2 + 31x + 1 = -9$ 11) _____
 A) $-\frac{5}{3}, -\frac{2}{5}$ B) $\frac{5}{3}, \frac{2}{5}$ C) $-\frac{3}{5}, -\frac{2}{5}$ D) $\frac{3}{5}, \frac{5}{2}$

Objective: (13.6) Solve quadratic equations by factoring.
 M77-36 M57-18 m53-14 m50-11

12) $10x^3 + 70x^2 + 120x = 0$ 12) _____
 A) $0, -3, -4$ B) $-3, -4$ C) $0, 3, 4$ D) $-\frac{1}{3}, -4$

Objective: (13.6) Solve equations with degree greater than 2 by factoring.
 M77-32 M57-16 m53-12 m50-12

13) $y^3 + 6y^2 + 9y = 0$ 13) _____
 A) $0, -3$ B) $0, 3$ C) $3, -3$ D) $0, -3, 3$

Objective: (13.6) Solve equations with degree greater than 2 by factoring.
 M77-23 M57-14 m53-12 m50-13

14) $(3x + 2)(9x^2 + 12x + 4) = 0$ 14) _____
 A) $-\frac{2}{3}$ B) $-\frac{2}{3}, 0$ C) $-\frac{2}{3}, 3, -2$ D) $-\frac{2}{3}, 3, -2, 0$

Objective: (13.6) Solve equations with degree greater than 2 by factoring.
 M77-28 M57-16 m53-12 m50-14

15) $9x^3 - 16x = 0$ 15) _____
 A) $\frac{4}{3}, -\frac{4}{3}, 0$ B) $\frac{4}{3}$ C) $-\frac{4}{3}$ D) $\frac{4}{3}, -\frac{4}{3}$

Objective: (13.6) Solve equations with degree greater than 2 by factoring.
 M77-35 M57-15 m53-11 m50-15

16) $25x^3 - 30x^2 + 8x = 0$ 16) _____
 A) $\frac{4}{5}, \frac{2}{5}, 0$ B) $\frac{4}{25}, \frac{2}{25}$ C) $-\frac{4}{5}, -\frac{2}{5}, 0$ D) $\frac{2}{25}, \frac{6}{25}$

Objective: (13.6) Solve equations with degree greater than 2 by factoring.
 M77-32 M57-16 m53-12 m50-16

Find the product and simplify.

17) $\frac{2y}{4y + 2} \cdot \frac{10y + 5}{7}$ 17) _____
 A) $\frac{5y}{7}$ B) $\frac{5}{7}$ C) $\frac{5y}{14}$ D) $\frac{y}{7}$

Objective: (14.2) Multiply rational expressions.
 M77-40 M57-22 m53-18 m50-17

Find the quotient and simplify.

$$18) \frac{x^2 - y^2}{x + y} \div \frac{x}{x^2 - xy}$$

18) _____

A) $(x - y)^2$

B) $(x + y)$

C) $(x + y)^2$

D) $(x - y)(x + y)$

Objective: (14.2) Divide rational expressions.

M77-41 M57-23 m53-19 m50-18

Perform the indicated operation. Simplify if possible.

$$19) \frac{x^2 - 8x}{x - 6} + \frac{12}{x - 6}$$

19) _____

A) $x - 2$

B) $x + 6$

C) $x + 2$

D) $x - 6$

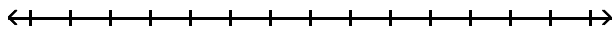
Objective: (14.3) Add and subtract rational expressions with the same denominator.

M77-43 M57-25 m53-21 m50-19

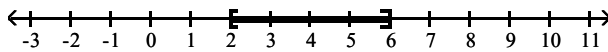
Solve the compound inequality. Graph the solution set.

$$20) 13 \leq 4t + 5 \leq 29$$

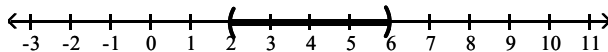
20) _____



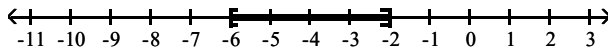
A) $[2, 6]$



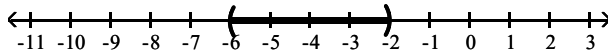
B) $(2, 6)$



C) $[-6, -2]$



D) $(-6, -2)$



Objective: (16.1) Solve compound inequalities containing "and."

M77-51 M57-30 m53-26 m50-20

Solve the absolute value equation.

$$21) |x + 3| = 6$$

21) _____

A) $-9, 3$

B) $9, 3$

C) -3

D) \emptyset

Objective: (16.2) Solve absolute value equations.

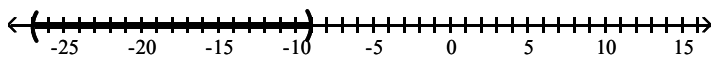
M77-52 M57-31 m53-27 m50-21

Solve the inequality. Graph the solution set.

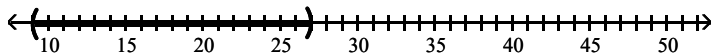
22) $|x + 18| < 9$

22) _____

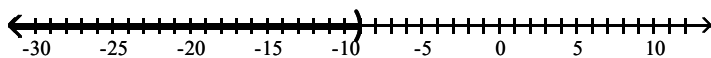
A) $(-27, -9)$



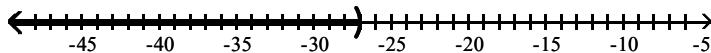
B) $(9, 27)$



C) $(-\infty, -9)$



D) $(-\infty, -27)$



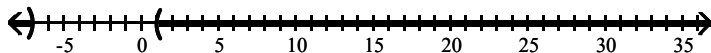
Objective: (16.3) Solve absolute value inequalities of the form $|X| < a$.

M77-53 M57-32 m53-28 m50-22

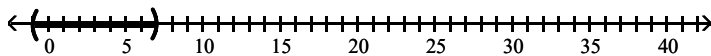
23) $|x + 3| > 4$

23) _____

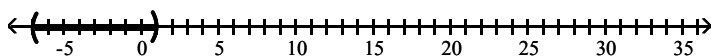
A) $(-\infty, -7) \cup (1, \infty)$



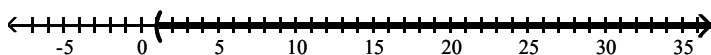
B) $(-1, 7)$



C) $(-7, 1)$



D) $(1, \infty)$



Objective: (16.3) Solve absolute value inequalities of the form $|X| > a$.

M77-54 M57-33 m53-29 m50-23

Find the square root. Assume that all variables represent positive real numbers.

24) $\sqrt{16x^{10}}$

24) _____

A) $4x^5$

B) $4x^{10}$

C) $16x^5$

D) $4x^2$

Objective: (17.1) Find square roots.

M77-55 M57-34 m53-24 m50-24

Evaluate.

25) If $f(x) = \sqrt{2x + 7}$, find the value of $f(37)$.

25) _____

A) 9

B) 81

C) 74

D) $\sqrt{74}$

Objective: (17.1) Find function values of square and cube roots.

M77-57 M57-32 m53-32 m50-25

Answer Key

Testname: AAFM03202018T1

- 1) D
- 2) B
- 3) A
- 4) A
- 5) A
- 6) A
- 7) A
- 8) A
- 9) A
- 10) A
- 11) A
- 12) A
- 13) A
- 14) A
- 15) A
- 16) A
- 17) A
- 18) A
- 19) A
- 20) A
- 21) A
- 22) A
- 23) A
- 24) A
- 25) A