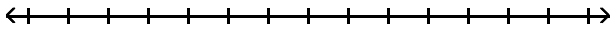


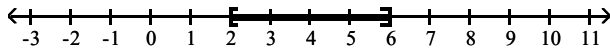
www.alvarezmathhelp.com**MULTIPLE CHOICE.** Choose the one alternative that best completes the statement or answers the question.**Solve the compound inequality. Graph the solution set.**

1) $13 \leq 4t + 5 \leq 29$

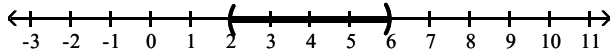
1) _____



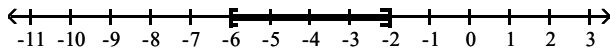
A) $[2, 6]$



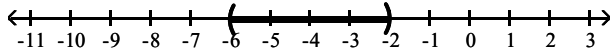
B) $(2, 6)$



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.

2) $|x + 3| = 6$

A) $-9, 3$

B) $9, 3$

C) -3

D) \emptyset

2) _____

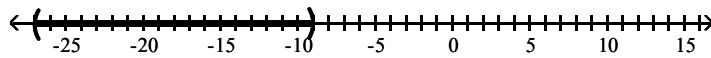
Objective: (16.2) Solve absolute value equations.
 m77-52 m57-31 m53-27 m50-21

Solve the inequality. Graph the solution set.

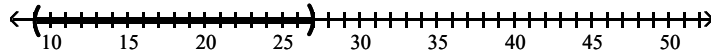
3) $|x + 18| < 9$

3) _____

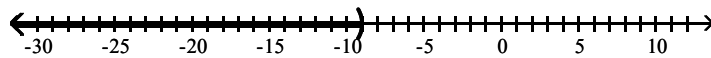
A) $(-27, -9)$



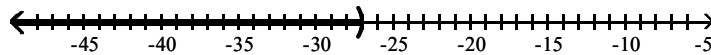
B) $(9, 27)$



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



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



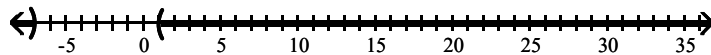
Objective: (16.3) Solve absolute value inequalities of the form $|X| < a$.

m77-53 m57-32 m53-28 m50-22

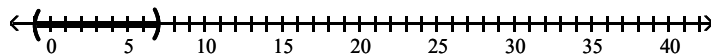
4) $|x + 3| > 4$

4) _____

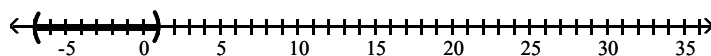
A) $(-\infty, -7) \cup (1, \infty)$



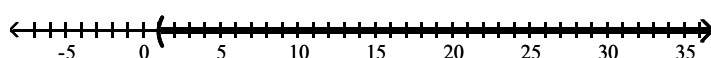
B) $(-1, 7)$



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.

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

5) _____

A) $4x^5$

B) $4x^{10}$

C) $16x^5$

D) $4x^2$

Objective: (17.1) Find square roots.

m77-55 m57-34 m53-30 m50-24

Evaluate.

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

6) _____

A) 9

B) 81

C) 74

D) $\sqrt{74}$

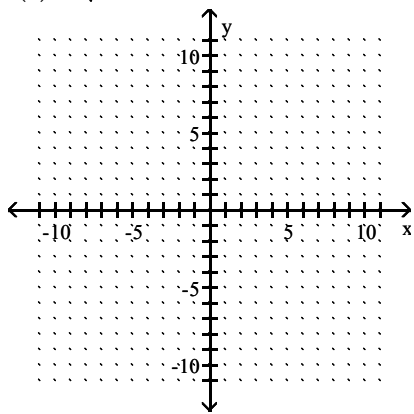
Objective: (17.1) Find function values of square and cube roots.

m77-57 m57-36 m53-32 m50-25

Identify the domain and then graph the function.

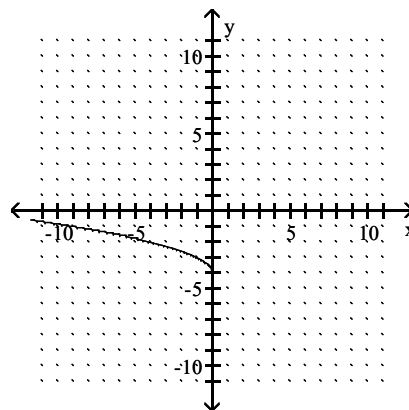
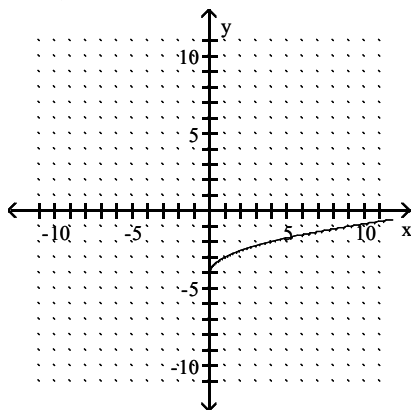
7) $f(x) = \sqrt{x} - 4$

7) _____



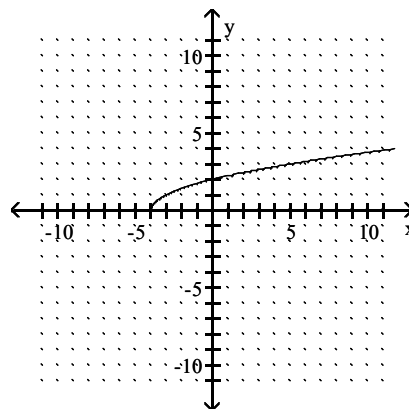
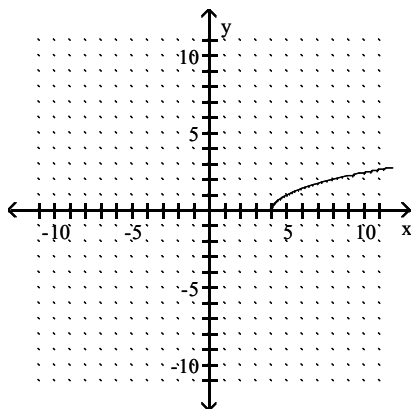
A) $[0, \infty)$

B) $(-\infty, 0]$



C) $[4, \infty)$

D) $[-4, \infty)$



Objective: (17.1) Graph square and cube root functions.

m77-49 m57-29 m53-51 m50-26

Use radical notation to write the expression. Simplify if possible.

8) $256^{1/4}$

8) _____

A) 4

B) 16

C) 64

D) 1024

Objective: (17.2) Understand the meaning of $a^{(1/n)}$.

m77-58 m57-37 m53-33 m50-27

Simplify the radical expression. Assume that all variables represent positive real numbers.

9) $\sqrt{20}$

9) _____

A) $2\sqrt{5}$

B) $5\sqrt{2}$

C) 10

D) 4

Objective: (17.3) Simplify radicals.

m77-59 m57-38 m53-34 m50-28

10) $\sqrt{320k^7q^8}$ 10) _____
 A) $8k^3q^4\sqrt{5k}$ B) $8k^7q^8\sqrt{5k}$ C) $8k^3q^4\sqrt{5}$ D) $8q^4\sqrt{5k^7}$

Objective: (17.3) Simplify radicals.
 m77-55 m57-42 m53-30 m50-29

11) $\sqrt[3]{512x^4y^5}$ 11) _____
 A) $8xy\sqrt[3]{xy^2}$ B) $5xy\sqrt[3]{xy^2}$ C) $8xy\sqrt[3]{xy}$ D) $8xy\sqrt{xy^2}$

Objective: (17.3) Simplify radicals.
 m57-43 m53-31 m50-30

Find the distance between the pair of points.

12) $(-4, 2)$ and $(-12, -4)$ 12) _____
 A) 10 units B) 100 units C) 11 units D) 20 units

Objective: (17.3) Use the distance and midpoint formula.
 m50-31

Find the midpoint of the line segment whose endpoints are given.

13) $(4, -8), (0, 4)$ 13) _____
 A) $(2, -2)$ B) $(2, -6)$ C) $(4, -12)$ D) $(4, -4)$

Objective: (17.3) Use the distance and midpoint formula.
 m50-32

Solve.

14) $\sqrt{x+4} = 8$ 14) _____
 A) 60 B) 64 C) 68 D) 144

Objective: (17.6) Solve equations that contain radical expressions.
 m77-65 m57-44 m53-40 m50-40

15) $\sqrt{20x+20} = x+6$ 15) _____
 A) 4 B) -3 C) -4 D) 5

Objective: (17.6) Solve equations that contain radical expressions.
 m57-44 m50-34

Perform the indicated operation. Write the result in the form $a + bi$.

16) $(6 + 6i) - (-9 + i)$ 16) _____
 A) $15 + 5i$ B) $15 - 5i$ C) $-3 + 7i$ D) $-15 - 5i$

Objective: (17.7) Add or subtract complex numbers.
 m77-67 m57-46 m53-42 m50-35

17) $(5 + 3i)(5 - 3i)$ 17) _____
 A) $34 + 0i$ B) $25 - 9i^2$ C) $16 + 0i$ D) $25 - 9i$

Objective: (17.7) Multiply complex numbers.
 m77-68 m57-47 m53-43 m50-36

18) $\frac{8 + 7i}{9 - 2i}$ 18) _____
 A) $\frac{58}{85} + \frac{79}{85}i$ B) $\frac{58}{77} - \frac{79}{77}i$ C) $\frac{86}{85} - \frac{47}{85}i$ D) $\frac{86}{77} - \frac{79}{77}i$

Objective: (17.7) Divide complex numbers.
 m77-69 m57-48 m53-44 m50-37

Use the square root property to solve the equation.

- 19) $(x - 5)^2 = 36$ 19) _____
 A) 11, -1 B) -1, -11 C) 6, -6 D) 41

Objective: (18.1) Use the square root property to solve quadratic equations.
 m77-70 m57-49 m53-45 m50-38

Use the quadratic formula to solve the equation.

- 20) $x^2 + 24x + 144 = 0$ 20) _____
 A) -12, 12 B) -12 C) $12 - i, 12 + i$ D) 12

Objective: (18.2) Solve quadratic equations by using the quadratic formula.
 m77-33 m57-52 m53-48 m50-39

- 21) $x^2 + 18x + 70 = 0$ 21) _____
 A) $9 + \sqrt{11}$ B) $-18 + \sqrt{70}$
 C) $9 - \sqrt{70}, 9 + \sqrt{70}$ D) $-9 - \sqrt{11}, -9 + \sqrt{11}$

Objective: (18.2) Solve quadratic equations by using the quadratic formula.
 m77-73 m57-53 m53-49 m50-40

- 22) $x^2 - 8x + 20 = 0$ 22) _____
 A) $4 - 2i, 4 + 2i$ B) $4 - 4i, 4 + 4i$ C) $4 + 2i$ D) $6, 2$

Objective: (18.2) Solve quadratic equations by using the quadratic formula.
 m57-54 m53-50 m50-41

- 23) $2x^2 - 7x - 9 = 0$ 23) _____
 A) $\frac{2}{9}, 1$ B) $\frac{9}{2}, -1$ C) $\frac{2}{9}, 0$ D) $\frac{2}{9}, -1$

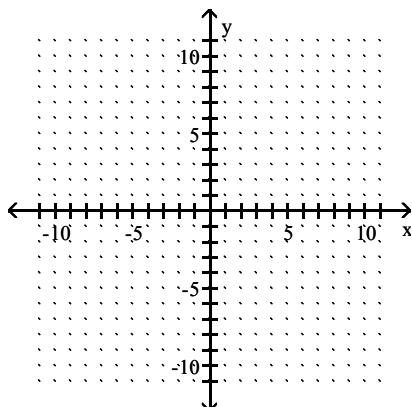
Objective: (18.2) Solve quadratic equations by using the quadratic formula.
 m77-72 m57-51 m53-14 m50-42

- 24) $7x^2 = -12x - 3$ 24) _____
 A) $\frac{-6 - \sqrt{57}}{7}, \frac{-6 + \sqrt{57}}{7}$ B) $\frac{-6 - \sqrt{15}}{14}, \frac{-6 + \sqrt{15}}{14}$
 C) $\frac{-12 - \sqrt{15}}{7}, \frac{-12 + \sqrt{15}}{7}$ D) $\frac{-6 - \sqrt{15}}{7}, \frac{-6 + \sqrt{15}}{7}$

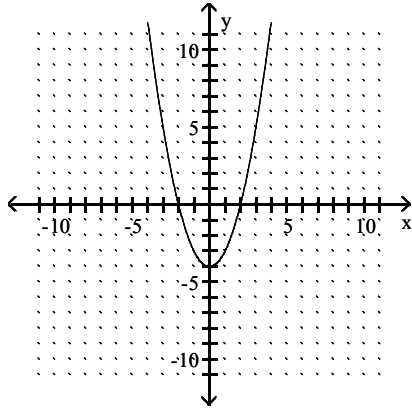
Objective: (18.2) Solve quadratic equations by using the quadratic formula.
 m77-74 m57-53 m53-49 m50-43

Sketch the graph of the quadratic function. Give the vertex and axis of symmetry.

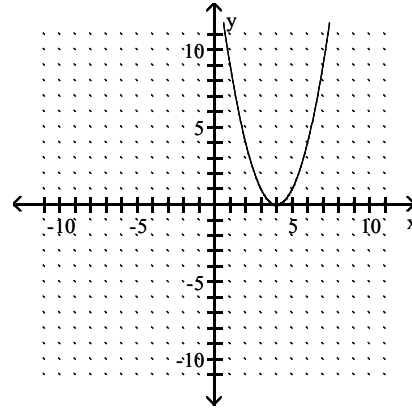
- 25) $f(x) = x^2 - 4$ 25) _____



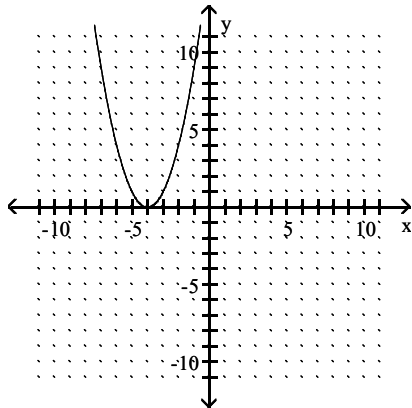
A) vertex $(0, -4)$; axis $x = 0$



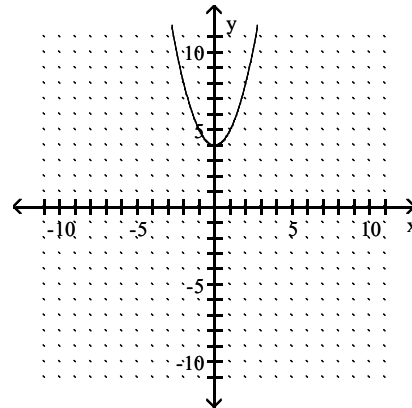
B) vertex $(4, 0)$; axis $x = 4$



C) vertex $(-4, 0)$; axis $x = -4$



D) vertex $(0, 4)$; axis $x = 0$



Objective: (18.5) Graph quadratic functions of the form $f(x) = x^2 + k$.
m77-75 m57-29 m53-51 m50-44

Answer Key

Testname: AAFM03202018T2

- 1) A
- 2) A
- 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) B
- 21) D
- 22) A
- 23) B
- 24) D
- 25) A