

Name _____

math 0320 Exam #2 0404700aafm032024350mt2aw

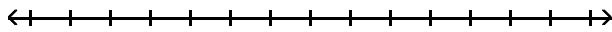
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SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.

Solve the compound inequality. Graph the solution set.

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

1) _____



m50-20

Solve the absolute value equation.

2) $|x + 3| = 6$

2) _____

m50-21

Solve the inequality. Graph the solution set.

3) $|x + 18| < 9$

3) _____

m50-22

4) $|x + 3| > 4$

4) _____

m50-23

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

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

5) _____

m50-24

Evaluate.

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

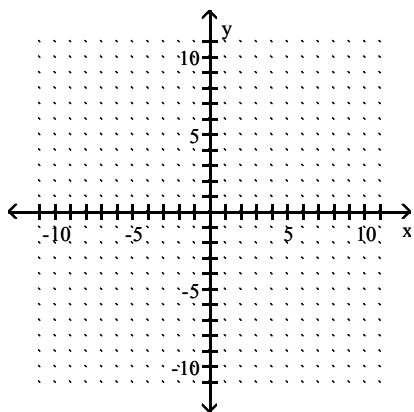
6) _____

m50-25

Identify the domain and then graph the function.

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

7) _____



m50-26

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

8) $256^{1/4}$

8) _____

m50-27

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

9) $\sqrt{20}$

9) _____

10) $\sqrt[5]{320k^7q^8}$

10) _____

11) $\sqrt[3]{512x^4y^5}$

11) _____

Find the distance between the pair of points.

12) $(-4, 2)$ and $(-12, -4)$

12) _____

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

13) $(4, -8), (0, 4)$

13) _____

m50-32

Solve.

14) $\sqrt{x+4} = 8$

14) _____

m50-33
15) $\sqrt{20x+20} = x+6$

15) _____

m50-34
Perform the indicated operation. Write the result in the form $a + bi$.

16) $(6 + 6i) - (-9 + i)$

16) _____

m50-35
17) $(5 + 3i)(5 - 3i)$

17) _____

m50-36
18) $\frac{8 + 7i}{9 - 2i}$

18) _____

m50-37
Use the square root property to solve the equation.

19) $(x - 5)^2 = 36$

19) _____

m50-38

Use the quadratic formula to solve the equation.

20) $x^2 + 24x + 144 = 0$

20) _____

m50-39

21) $x^2 + 18x + 70 = 0$

21) _____

m50-40

22) $x^2 - 8x + 20 = 0$

22) _____

m50-41

23) $2x^2 - 7x - 9 = 0$

23) _____

m50-42

24) $7x^2 = -12x - 3$

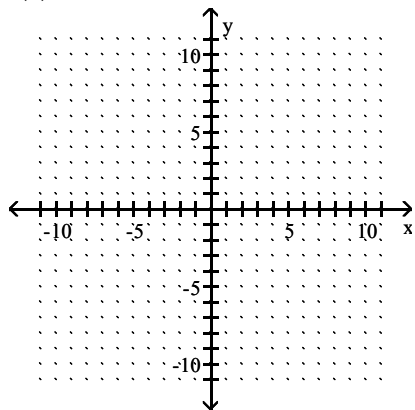
24) _____

m50-43

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

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

25) _____

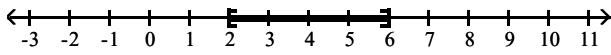


m50-44

Answer Key

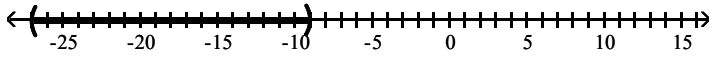
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1) $[2, 6]$

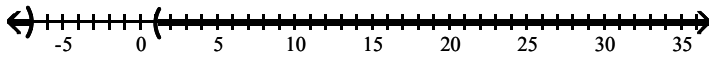


2) $-9, 3$

3) $(-27, -9)$



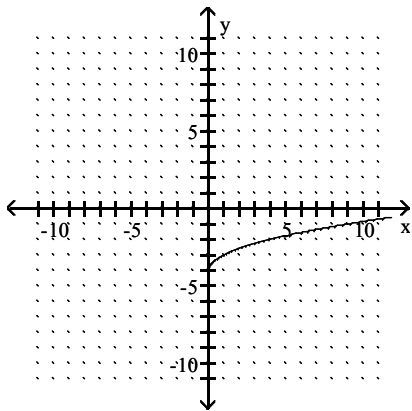
4) $(-\infty, -7) \cup (1, \infty)$



5) $4x^5$

6) 9

7) $[0, \infty)$



8) 4

9) $2\sqrt{5}$

10) $8k^3q^4\sqrt{5k}$

11) $8xy\sqrt[3]{xy^2}$

12) 10 units

13) $(2, -2)$

14) 60

15) 4

16) $15 + 5i$

17) $34 + 0i$

18) $\frac{58}{85} + \frac{79}{85}i$

19) 11, -1

20) -12

21) $-9 - \sqrt{11}, -9 + \sqrt{11}$

22) $4 - 2i, 4 + 2i$

23) $\frac{9}{2}, -1$

24) $\frac{-6 - \sqrt{15}}{7}, \frac{-6 + \sqrt{15}}{7}$

Answer Key

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

