# *SECTION QUIZ 4-3*



**Remember:**
Score an 85% or higher on all three quizzes and you may be exempt from the chapter test!




*Congratulations! You have completed this section!*
***Answer the following questions to test your understanding of the material. When you are finished, hand in your quiz to your teacher. Each answer is worth 2.2 points.***

**Solve the following combined inequalities. Show your work in the space provided. Express the solution in set-builder notation for numbers 1-4 and interval notation for numbers 6-8. Choose the response for number 5 that correctly expresses both set-builder and interval notation.**

**1.** $32 < 4x \leq 48$ _____

**2.** $-2 < 2x < 24$ _____

**3.** $35 \leq 5x + 10 \leq 45$ _____

**4.** $-7 < 7x \leq 49$ _____

**5.** $6 \leq x + 1 < 9$ _____

(a) $\{x \mid -5 \leq x < -8\}$; $(-8, -5]$
(b) $\{x \mid 5 \leq x < 8\}$; $[5, 8)$
(c) $\{x \mid 7 \leq x < 10\}$; $[7, 10)$
(d) $\{x \mid x < 8\}$; $(-\infty, 8)$

**6.** $200 < 5x + 50 \leq 325$ _____

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**7.** $5 > 2x - 3 > -3$ _____

**8.** $42 \leq 7x < 56$ _____

**9.** The absolute value of 8 is _____.

**10.** The absolute value of -5 is _____.

**Determine the absolute value of each of the following. Write the answer on the blank.**

**11.** $|-9|$ = _____

**12.** $|11|$ = _____

**13.** $|-33|$ = _____

**14.** $|-1|$ = _____

**15.** $|0|$ = _____

**16.** $|85|$ = _____

**17.** $|-65|$ = _____

**18.** $|13|$ = _____

**19.** $|-59|$ = _____

**20.** $|15|$ = _____

**Simplify the following expressions containing absolute value symbols. Write the answer on the blank.**

**21.** $3|7|$ = _____

**22.** $2|-1|$ = _____

**23.** $-|54|$ = _____

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**24.** $5|-4| =$ _____

**25.** $|5 - 7| =$ _____

**26.** $|10 - 9| =$ _____

**27.** $|-8 + 5| =$ _____

**28.** $2|2| + 2 =$ _____

**29.** $2|-3 - 2| =$ _____

**30.** $4|7 - 3| - 5 =$ _____

**Multiple Choice.**

**31.** Choose the formula for the distance between two points on a Cartesian coordinate plane.

_____

(a) $d = \sqrt{(x+y)^2 - (x+y)^2}$ (c) $d = \sqrt{(x+y)^2 + (x+y)^2}$

(b) $d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$ (d) $d = \sqrt{(x_1 + x_2)^2 + (y_1 + y_2)^2}$

**32.** Which is the Pythagorean Theorem algebraically? _____

(a) $c^2 = a^2 + b^2$ (c) $b^2 = c^2 - a^2$ (e) none of these

(b) $a^2 = c^2 - b^2$ (d) $c = \sqrt{a^2 + b^2}$ (f) all of these

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**Use the distance formula to calculate the distance between the points. Be sure to show your work. Write your answer on the blank.**

**33.** (3, 4), (3, 2) _____

**34.** (1, 1), (-3, 0) _____

**35.** (0, 0), (2, 3) _____

**Determine the coordinates of the midpoint of the line segment between the points in each problem below. Show your work and write the answer on the blank.**

**36.** (2, 4), (4, 6) _____

**37.** (7, 8), (3, 0) _____

**38.** (1, 2), (7, 10) _____

**39.** (50, 40), (74, 84) _____

**40.** (200, 100), (100, 200) _____

**Match the following Life Principles.**

**41.** _____ *"When combined, wisdom and hard work*

**42.** _____ *"An absolute of great value*

**43.** _____ *"If you don't want anyone to know,*

**44.** _____ *"You can go farther*

**45.** _____ *"Always put off until tomorrow*

(a) *don't do it."*

(b) *what you shouldn't do at all."*

(c) *is truth."*

(d) *by coordinating your efforts with others."*

(e) *spell success."*

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