Date: _____ Grade: _____

SECTION QUIZ 6-3



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 2.5 points.

Choose the correct answer or fill in the blank.

1. The mathematical expression for *two more than three times the width* is _____.

2. The formula for the perimeter of a rectangle is _____.

3. A member of the set of numbers {…-3, -2, -1, 0, 1, 2, 3, …} is called a(n) _____.

4. The distance around most shapes is called the _____.
(a) circumference (b) latitude (c) perimeter (d) area

Work the following perimeter problems. Show your work and write your answers on the blanks.

5. The length of a rectangle is three times the width plus four inches. If the perimeter of the rectangle is 32 inches, calculate the dimensions of the rectangle.
l = _____ w = _____

6. The length of a rectangle is four times the width plus one inch. If the perimeter of the rectangle is 22 inches, calculate the dimensions of the rectangle.
l= _____ w = _____

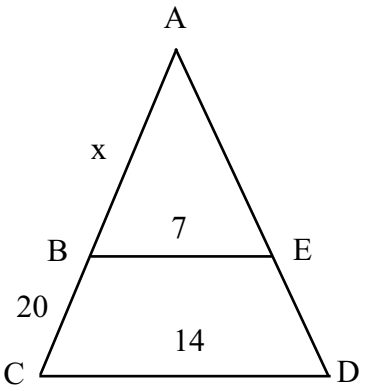
7. The sides of a triangle are consecutive, even integers. The perimeter of the triangle is 93 meters. Determine the length of the sides.
s_1 = _____, s_2 = _____, s_3 = _____

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Work the following similarity problems containing polynomials. Shapes are NOT necessarily to scale. Show your work and write your answers on the blanks.

8. Look at the similar triangles below. Determine the dimensions of ∆ACD.

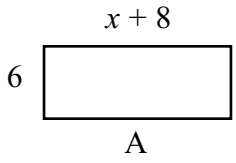
AC = ___; CD = ___; AD = ___

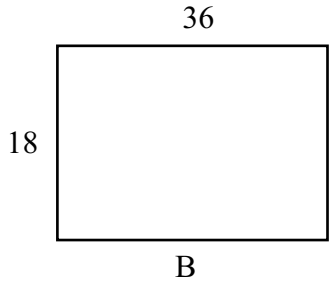


9. Determine the dimensions of rectangle A below by using the properties of similarity.

_____

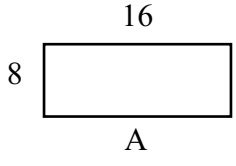
(a) 6 in. × 12 in. (b) 8 in. × 12 in. (c) 4 in. × 6 in. (d) 6 in. × 10 in.

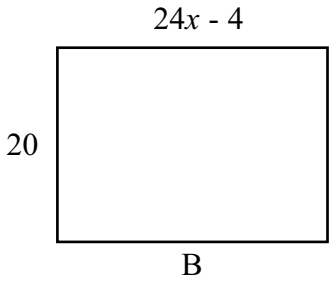




10. Determine the dimensions of rectangle B below by using the properties of similarity.

_____





11. *Equilateral* means that the sides are of _____ length.

(a) similar (b) equal (c) corresponding (d) congruent

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12. The formula for the circumference of a circle is _____.
(a) $C = 2\pi d$ (b) $A = \pi r^2$ (c) $C = 2\pi r$ (d) $D = \pi r^2$

Work the following perimeter problems that contain lengths given as polynomials. Show your work and write your answers on the blanks.

13. The lengths of the sides of a pentagon are consecutive odd integers. The perimeter of the pentagon is 35 meters. Calculate the lengths of the sides of the pentagon.
_____

14. The lengths of the sides of an octagon (eight sides) are 2 less than the lengths of the sides of a second octagon. The perimeter of the first octagon is 48 centimeters. Calculate the perimeter of the second octagon. _____.

15. The circumference of a circle is 88 feet. The radius of the circle is given in the form of the polynomial, $2x + 4$. Calculate the radius of the circle. _____
(a) 31.4 ft (b) 24 ft (c) 14 ft (d) 5 ft

16. A(n) _____ number is a number that contains only two factors: the number itself and one.

17. Composite numbers are numbers that are _____ prime.

18. Determining all the prime factors of a number or mathematical expression is called the _____ of that number or mathematical expression.

19. The complete factorization of 16 is _____.

20. The complete factorization of $18x^3y^2$ is _____.

21. To check a factoring problem, you use the _____ to undo the factorization.

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Factor completely the following expressions. Show your work and write your answers on the blanks.

22. $20x$ _____

23. $14x^2y^2$ _____

24. $3x + 12$ _____

25. $4x + 16$ _____

26. $4xa + 8xb + 12xc$ _____

27. $10x^2y + 20xy + 30y$ _____

28. $3xa + 3xb + 3xc + 3xd$ _____

29. You cannot divide out or cancel a factor unless the factor is contained in _____ of the terms of an expression.

30. The symbol for "not equal to" is _____.

31. Is there a common factor other than one, in the fractional expression, $\frac{3x+2}{8x+8}$? _____

(a) Yes or (b) No

32. $\frac{(x-5)}{(x-5)} =$ _____

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33. When the same term or number is in the numerator and denominator, $\frac{(x-4)}{(x-4)}$, the terms can _____ out.

Simplify completely the following mathematical expressions. Show your work and write your answers on the blanks.

34. $\frac{5x+25}{3x+15} =$ _____

35. $\frac{3x+15}{6x^2+12x-6} =$ _____

Match the following Life Principles.

36. _____ *"It is better to ask some of the questions*

37. _____ *"Nothing is swifter*

38. _____ *"Courage is resistance to fear,*

39. _____ *"I long to accomplish a great and noble task, but it is my chief duty to accomplish small tasks*

40. _____ *"If we do not maintain Justice,*

(a) *as if they were great and noble."*

(b) *than to know all of the answers."*

(c) *Justice will not maintain us."*

(d) *mastery of fear—not absence of fear."*

(e) *than rumor."*

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