

REVIEW FOR MATH 0308 FINAL EXAM

Find the sum of the angle measures of the specified polygon. (8.1)

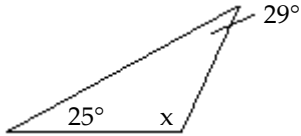
1) An octagon.

1) _____

Find the missing angle measure. (8.1)

2)

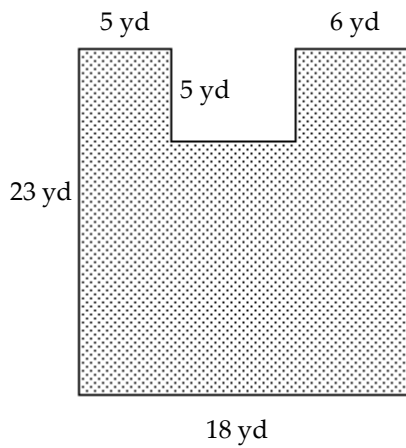
2) _____



Find the area. (8.3)

3)

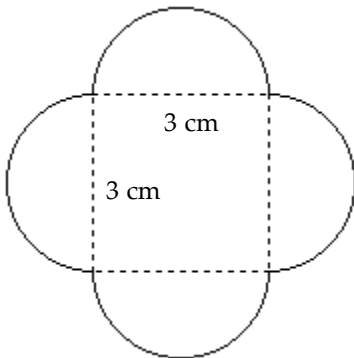
3) _____



Find the perimeter. Use 3.14 for π . (8.4)

4)

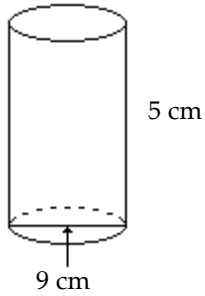
4) _____



Solve the problem. Round your answer to the nearest whole number if necessary. (8.5)

5) Find the volume of the circular cylinder pictured below. Use 3.14 for π .

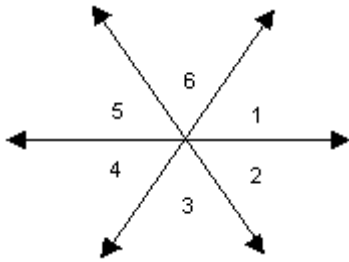
5) _____



Use the vertical angle property to find the indicated angle measures. (8.6)

6) In the figure, $m\angle 1 = 29^\circ$ and $m\angle 3 = 116^\circ$. Find $m\angle 2$, $m\angle 4$, $m\angle 5$, and $m\angle 6$.

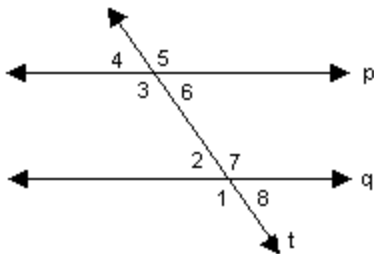
6) _____



Use the properties of parallel lines to solve the problem. (8.6)

7) If $p \parallel q$ and $m\angle 8 = 47^\circ$, what are the measures of the other angles?

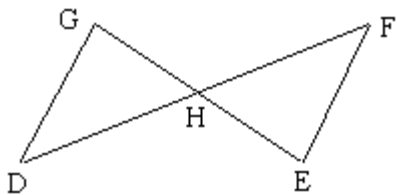
7) _____



Answer the question. (8.7)

8) H is the midpoint of \overline{GE} and $\angle DGH \cong \angle FEH$. By which property is $\triangle DGH \cong \triangle FEH$?

8) _____



A) AAA

B) SAS

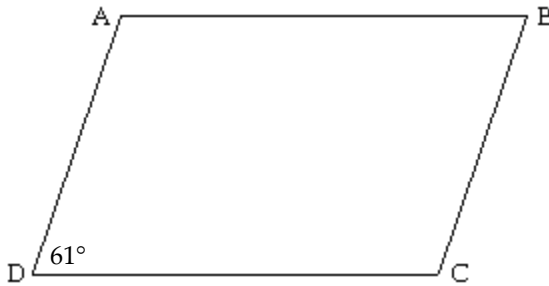
C) SSS

D) ASA

Find the measures of the indicated sides, angles, or diagonals of the given parallelogram. (8.7)

9) Find $m\angle A$, $m\angle B$, and $m\angle C$.

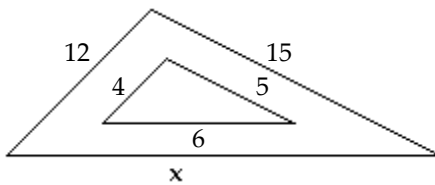
9) _____



Assume that the given triangles are similar. Provide the missing length. (8.8)

10)

10) _____



Translate the phrase to an algebraic expression. (9.1)

11) Four less than half of some number

11) _____

Convert to decimal notation. (9.2)

12) $\frac{23}{99}$

12) _____

Simplify. (9.4)

13) $13 + (-8) - 5 - (-16) + 6$

13) _____

Divide. (9.6)

14) $\left(\frac{-5}{8}\right) \div \left(\frac{8}{-5}\right)$

14) _____

Simplify. (9.8)

15) $4 \cdot (4 + 4)^2 - 4 \cdot (6 \div 2)^2$

15) _____

Solve the equation. (10.3)

16) $-10.5r - 1.4 = 53.2 - 1.4r$

16) _____

17) $-\frac{1}{3}p + \frac{3}{8}p = -2$

17) _____

18) $\frac{3}{5}(3x - 5) = \frac{1}{3}(4x + 5)$

18) _____

Solve for the specific variable. (10.4)

19) $e = \frac{a + b - c + d}{4}$ for c

19) _____

Solve the problem. (10.5)

20) The parking lot at a grocery store has 55 cars in it. 60% of the cars are blue. How many cars are blue?

20) _____

Solve the problem. (10.6)

21) Find the length of a rectangular lot with a perimeter of 76 meters if the length is 8 meters more than the width. ($P = 2L + 2W$)

21) _____

22) The sum of three consecutive odd integers is 267. Find the integers.

22) _____

Solve using the multiplication principle. (10.7)

23) $-5b < -15$

23) _____

Find the solution set. (10.7)

24) $4(6x - 11) > 20x - 36$

24) _____

Translate the sentence to an algebraic inequality. (10.8)

25) John weighs at least 170 pounds.

25) _____

Decide whether or not the ordered pair is a solution to the equation. (11.1)

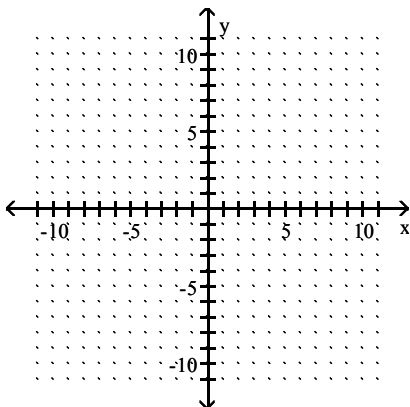
26) $3x + 4y = 25$; (3, 4)

26) _____

Graph the linear equation. (11.1)

27) $y = \frac{4}{3}x - 4$

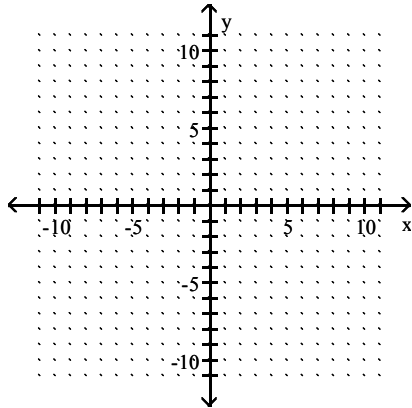
27) _____



Graph. (11.2)

28) $x = 1$

28) _____



Multiply and simplify. (12.1)

29) $5^{10} \cdot 5^{-2}$

29) _____

Simplify. (12.2)

30) $\left(\frac{2x^4y}{z^5}\right)^5$

30) _____

Convert to decimal notation. (12.2)

31) 8.0844×10^6

31) _____

Write the number in scientific notation. (12.2)

32) 0.000315

32) _____

Perform the indicated operation. Write the answer in scientific notation. (12.2)

33) $(5 \times 10^8)(7 \times 10^9)$

33) _____

34) $\frac{6.96 \times 10^{-1}}{2.4 \times 10^8}$

34) _____

Collect like terms and write in descending order. (12.3)

35) $18 + 4x^2 + 3x^6 + 3x^3 - x + 2x^6 - 9 + 4x^2 + 3x$

35) _____

Add. (12.4)

36) $(7x^8 - 8x^4 + 6x^2 + 3x + 9) + (10x^7 + 2x^4 - 5x)$

36) _____

Subtract. (12.4)

37) $(8x^4 + 2x^6 + 1 - 3x^5) - (5 - 7x^5 + 8x^6 - 6x^4)$

37) _____

Multiply. (12.5)

38) $(5y - 4)(3y^3 - 5y^2 - 3y + 2)$

38) _____

Find the product. (12.6)

39) $(4y - 5)(4y + 5)$

39) _____

Multiply. (12.6)

40) $(9t + 10)^2$

40) _____

Evaluate the polynomial. (12.7)

41) $x^2z - 3y^3 + 2xyz^2$ for $x = 5$, $y = -2$ and $z = 1$

41) _____

Divide. (12.8)

42) $\frac{15w^8 - 30w^6 + 6w^3}{3w^3}$

42) _____

Factor completely. (13.1)

43) $v^3 + 6v^2 - 10v - 60$

43) _____

Factor. (13.2)

44) $24n^8 - 27n^6 + 21n^4$

44) _____

Factor completely. One of the factors is (13.2)

45) $x^2 + 6x - 55$

A) $(x + 1)$

B) $(x + 5)$

C) $(x - 5)$

D) $(x - 11)$

45) _____

Factor completely. (13.5)

46) $49a^2 - 36b^4$

46) _____

Solve using the principle of zero products. (13.7)

47) $x(2x + 8) = 0$

47) _____

Find all numbers for which the rational expression is not defined. (14.1)

48) $\frac{b - 5}{5b - 10}$

48) _____

Multiply and, if possible, simplify. (14.1)

49) $\frac{y^2 - 2y}{y^2 - 8y + 15} \cdot \frac{y^2 + y - 12}{y^2 + 2y - 8}$

49) _____

Find the reciprocal. (14.2)

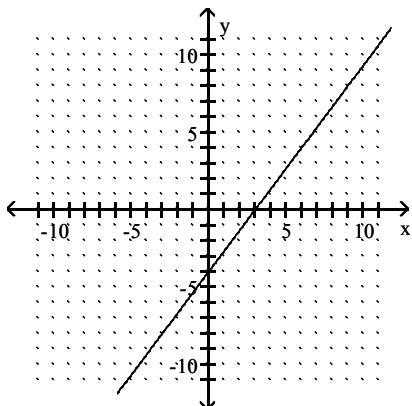
50) $\frac{t + 11}{t - 10}$

50) _____

Answer Key

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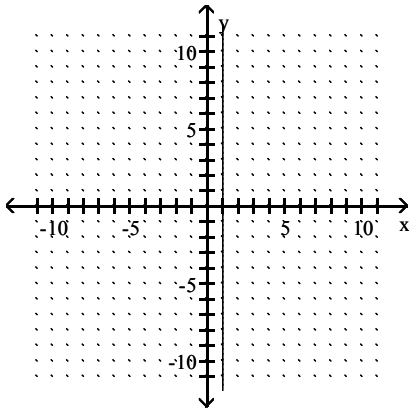
- 1) 1080°
- 2) 126°
- 3) 379 yd^2
- 4) 18.84 cm
- 5) 318 cm^3
- 6) $m\angle 2 = 35^\circ$; $m\angle 4 = 29^\circ$; $m\angle 5 = 35^\circ$; $m\angle 6 = 116^\circ$
- 7) $m\angle 2 = m\angle 4 = m\angle 6 = 47^\circ$, $m\angle 1 = m\angle 3 = m\angle 5 = m\angle 7 = 133^\circ$
- 8) D
- 9) $m\angle A = 119^\circ$
 $m\angle B = 61^\circ$
 $m\angle C = 119^\circ$
- 10) 18
- 11) $\frac{1}{2}x - 4$
- 12) $0.\overline{23}$
- 13) 22
- 14) $\frac{25}{64}$
- 15) 220
- 16) -6
- 17) -48
- 18) 10
- 19) $c = a + b + d - 4e$
- 20) 33 cars
- 21) 23 m
- 22) 87, 89, 91
- 23) $\{b \mid b > 3\}$
- 24) $\{x \mid x > 2\}$
- 25) $x \geq 170$
- 26) Yes
- 27)



Answer Key

Testname: MATH0308FINALREVIEW

28)



29) 5^8

30) $\frac{32x^{20}y^5}{z^{25}}$

31) 8,084,400

32) 3.15×10^{-4}

33) 3.5×10^{18}

34) 2.9×10^{-9}

35) $5x^6 + 3x^3 + 8x^2 + 2x + 9$

36) $7x^8 + 10x^7 - 6x^4 + 6x^2 - 2x + 9$

37) $-6x^6 + 4x^5 + 14x^4 - 4$

38) $15y^4 - 37y^3 + 5y^2 + 22y - 8$

39) $16y^2 - 25$

40) $81t^2 + 180t + 100$

41) 29

42) $5w^5 - 10w^3 + 2$

43) $(v + 6)(v^2 - 10)$

44) $3n^4(8n^4 - 9n^2 + 7)$

45) C

46) $(7a + 6b^2)(7a - 6b^2)$

47) 0, -4

48) $b = 2$

49) $\frac{y}{y - 5}$

50) $\frac{t - 10}{t + 11}$