

No cell phones or calculators allowed.

Show ALL work clearly!

1. FILL IN THE BLANKS. DO NOT ROUND.

<18 pts>

Reduced fraction	Percent	Decimal
$\frac{7}{16}$		
	$4\frac{1}{2}\%$	
		5.04

2. Compute: DO
<10 pts>

NOT ROUND.

a) $42.53 + 3.027$

b) $15 - 6.8989$

3. A thin piece of string 80 cm long is formed into a rectangle. If the width is 16 cm,

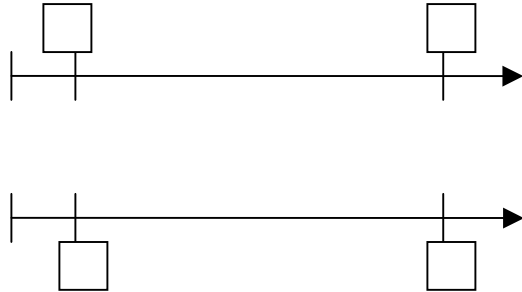
- a.) what is its length? (include units) <10 pts>
b.) what is its area? (include units)
c.) what is its width in meters?

<6 pts>

4. Joe went to a bakery to buy a cake for his son's birthday. He was choosing between a 16-inch circle cake (16 inches across) and a 15-inch square cake. Assuming the cakes had the same thickness and the same price, which would be a better deal? Explain your answer.

<6 pts>

5. A chocolate chip recipe calls for $1\frac{1}{2}$ cups of sugar to make 12 cookies. If you wanted to make 18 cookies, how many cups of sugar would be needed? Use proportion method. Give your answer as a reduced mixed number.



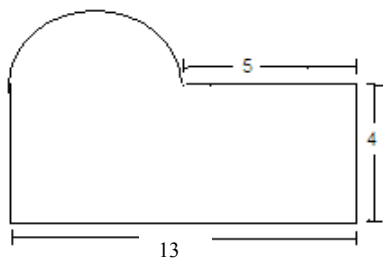
<6 pts>

6. Jocelyn bought a new television set. The total price after the 5% sales tax was added was \$87.55. What was the cost of the television set without the sales tax? Fill in the blanks. Let X be your unknown, then solve. Show all steps clearly. Round to the nearest cent if necessary.

_____ % OF _____ IS _____

<10 pts>

- 7) Find the area and perimeter of the following. Give exact answers. Assume all measurements are in inches. Include units with your answer.



a) Area =

b) Perimeter =

Answers

8. Work the following problems:

<8 pts>

- a) $54 - (-25)$
 b) $-32 - (-45)$

<5 pts>

9. Write in words 4123.456 using the work “and” and not “point”.

<10 pts>

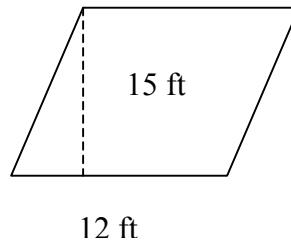
10. Round 3474.0621 to the nearest

- a.) ten
- b.) tenth
- c.) hundred
- d.) hundredth
- e) one
- f) thousand
- g) thousandth

Answers

<6 pts>

11. Find the area of the following figure using **yards**.



12. Write yes or no. Is $\sqrt{36}$ <5 pts>

a whole number? _____

an integer? _____

a rational number? _____

a real number? _____

an irrational number? _____

13. Use models (words and pictures) to explain each of the following. <10 pts>

a) $-4 + 7$

b) $-1 - (-2)$

14. (9 pts) Put in order from smallest to largest. Put the LETTER in the blanks.

$A = 2.817, B = 3\%, C = 400\%, D = 2\frac{16}{37}, E = 2.5, F = \sqrt{17}, G = 3^2, H = \frac{18}{5}, I = \pi$

_____, _____, _____, _____, _____, _____, _____, _____, _____

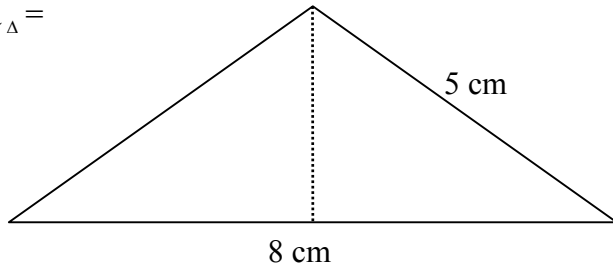
Answers

15. Determine the perimeter and area for the following isosceles triangle. Include units.

Perimeter $\Delta =$

<8 pts>

Area $\Delta =$



16. (20 pts) Work the following problems using Order of Operations. Show each step as if you were teaching.

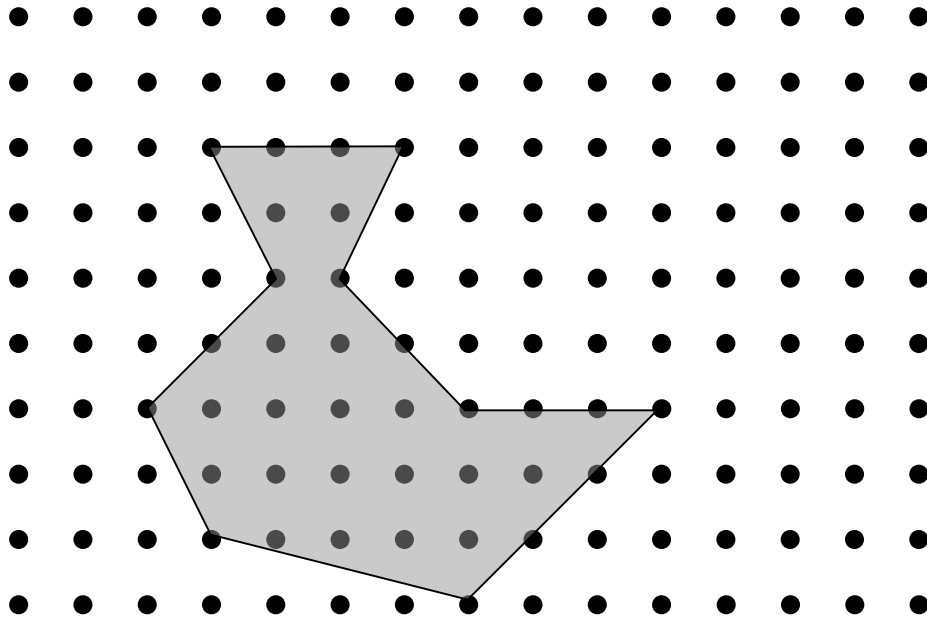
a) $16 - 4 \div 2 \times 7$

b) $10 + 5 [16 - 2(4 + 1)]$

c) $4(6 + 1) - 3^2 + [2(5 - 1) + 8]$

d) $18 \div [3(7 - 5)] - \sqrt{16} =$

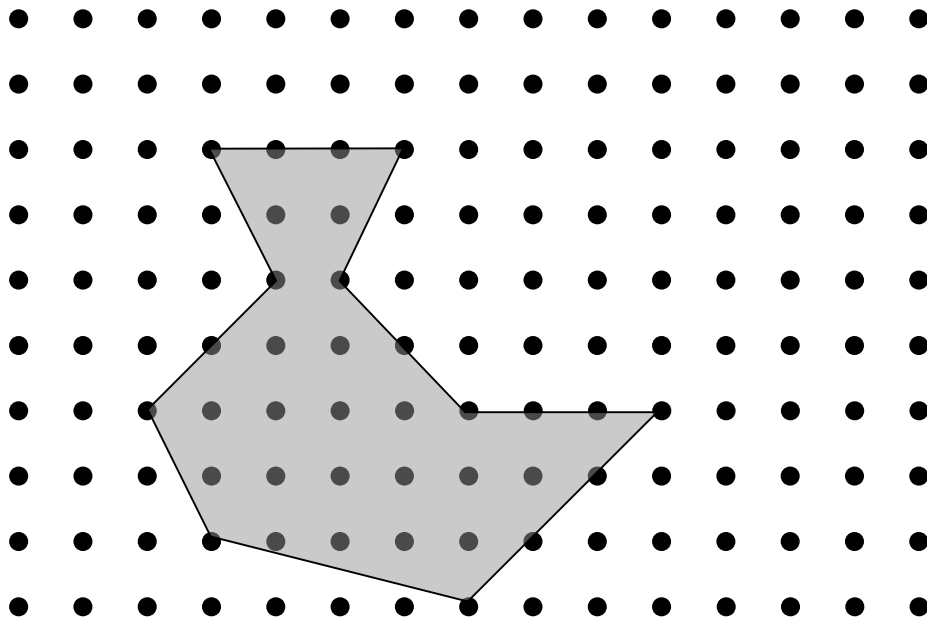
17. (7 pts) Find the perimeter of the following figure. Assume that the horizontal and vertical distance between adjacent dots is 1 unit. Give an exact answer.



The simplified exact answer for perimeter is :

[Answers](#)

18. (7 pts) Find the area of the following figure. Assume that the horizontal and vertical distance between adjacent dots is 1 unit. Show your work. Do not use Pick's Theorem.



Answer: Area is :

19. (8 pts) Perform the following conversions by one of the methods shown in class.

a) 4 cm to hm

b) 4 cups to quarts

20. Use percent number sense to answer the following. Use pictures or explain. Do not multiply.
<8 pts>

a) What is 75% of 80?

b) What is 125% of 12?

<5 pts>

21. Give an example of increasing a number by 30% and then decreasing your result by 30%. Show this doesn't yield the original number.

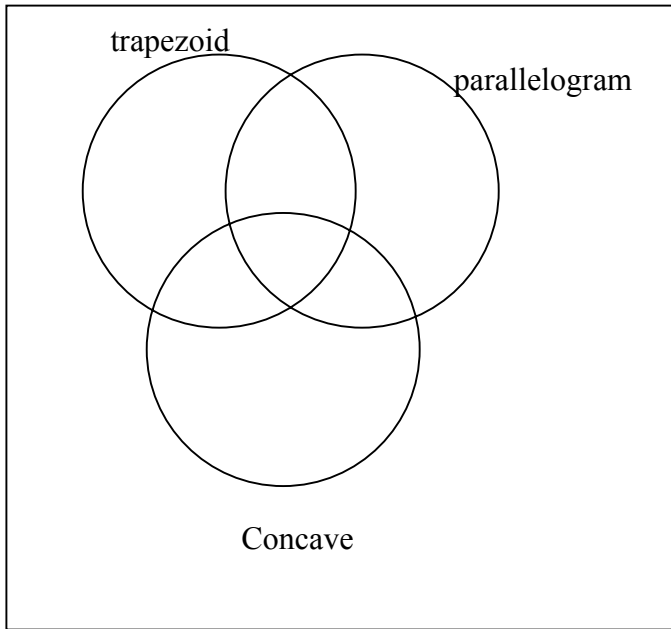
<6 pts>

22. Write true or false in the blank.

- _____ a) All isosceles triangles are equilateral.
- _____ b) All rhombuses are kites.
- _____ c) All right triangles are scalene.
- _____ d) An obtuse triangle can have two obtuse angles.

<12 pts>

23. Fill in the string diagram with the appropriate letters. Hatch or shade any region that is impossible to get a shape for.



- A)
- B)
- C)
- D)
- E)
- F)
- G)

1.

Reduced fraction	Percent	Decimal
$\frac{7}{16}$	43.75%	.4375
$\frac{9}{200}$	$4\frac{1}{2}\%$.045
$5\frac{1}{25}$	504%	5.04

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2. a) 45.557

b) 8.1011

3. a) 24 cm

b) 384 cm^2

c) .16 m

4. $A_{\square} = 15 \times 15 = 225 \text{ in}^2$

$$A_{\circ} = \pi(8)^2 = 64(3.14)$$

$$= 200.96 \text{ in}^2$$

The square cake is the better deal.

5. $\frac{1\frac{1}{2}}{12} = \frac{x}{18}$

$12x = 27$

$x = \frac{27}{12} = 3\frac{3}{12} = 2\frac{1}{4} \text{ cups}$

6. 105% of x is 87.55

$1.05x = 87.55$

$x = \$83.38$

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7. Area = $52 + 8\pi \text{ in}^2$

Perimeter = $26 + 4\pi \text{ in}^2$

8. a) $54 + 25 = 79$

b) $-32 + 45 = 13$

9. Four thousand one hundred twenty-three and four hundred fifty-six thousandths

10. a) 3470

e) 3474

b) 3474.1

f) 3000

c) 3500

g) 3474.062

d) 3474.06

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