1. What would be the most appropriate unit of measurement to measure the length of a house?

   A. millimeters B. centimeters C. meters D. Kilometers

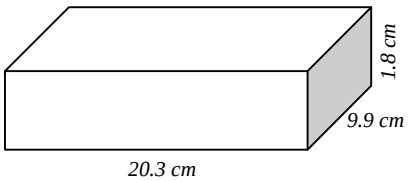
2. What would be the most appropriate unit of measurement to measure the mass of a bag of chips?

   A. milligrams B. grams C. Kilograms D. Mega grams

3. Estimate the volume of the following object:

   A. 32 cm^3 B. 60 cm^3 C. 240cm^3 D. 400 cm^3

   $V = l \cdot w \cdot h$
   $= (20)(10)(2)$
   $= 400\ cm^3$



4. Which would be a good estimate of the temperature on a comfortably cool day in the fall?

   A. 3° C B. 23° C C. 43° C D. 73° C

5. Which would be a reasonable estimate for the mass of a car?

   A. 2000 g B. 80 Kg C. 150 Kg D. 1500 Kg

6. Sharon played in the pool during the summer from 10:30 a.m. until 2:15 pm and she did take a 45 minute break to eat lunch. How long did Sharon spend in the pool on this day?

   10:30, 11:30, 12:30, 1:30, 2:15 (1 HR, 1 HR, 1 HR, 45 MIN) = 3 HR 45 MIN − 45 MIN = 3 HR

   A. 3 hours B. 3.5 hours C. 4 hours D. 4.75 hours

7. It is approximately 290 miles from Atlanta to Savannah. If a person is traveling at an average of 58 mph, approximately how many hours will it take to get to Savannah with out stopping?

   $D = R \cdot T$
   $300 \approx 60 \cdot T$

   A. 4 hours B. 5 hours C. 6 hours D. 7 hours

8. A particular bag of fertilizer covers 400 square feet. What is the least number of bags a person would need to purchase in order to cover a rectangular yard that is 50 feet long by 60 feet wide?

   $A = l \cdot w = 50 \cdot 60 = 3000\ ft^2$ $\quad \frac{3000}{400} = 7.5$

   A. 5 bags B. 8 bags C. 10 bags D. 12 bags

9. The following picture shows which type of transformation?

   A. translation B. rotation
   C. reflection D. dilation

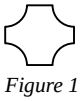


Figure 1

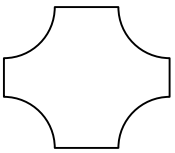


Figure 2

10. Sliding a figure into a different location is which type of transformation?

    A. translation B. rotation C. inverse D. dilation

11. The following picture shows which type of transformation?

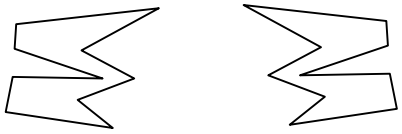


Figure 1 *Figure 2*

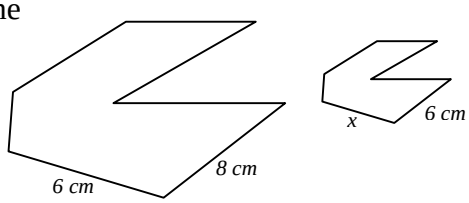
A. translation B. rotation
C. reflection D. dilation

12. Assuming the figures shown are similar find the missing length (x)?

$\frac{6}{x} \times \frac{8}{6}$

$\frac{8x}{8} = \frac{36}{8}$

$x = 4.5$



A. 4.5 cm B. 5.5 cm
C. 6 cm D. 8 cm

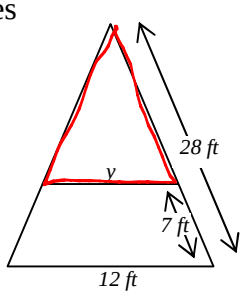
13. Jim changes the size of a picture on the copier. The original picture was 10 inches long by 6 inches wide. The new copy of the picture is 8 inches long. What would be the width of the new picture?

$\frac{\text{LENGTH}}{\text{WIDTH}}: \frac{10}{6} \times \frac{8}{x}$ $\frac{10x}{10} = \frac{48}{10}$ $x = 4.8$

A. 4 inches B. 4.8 inches C. 7.5 inches D. 13.3 inches

14. Assuming the triangle shown are similar find the unknown length (y).

A. 3 feet B. 5.25 feet C. 8.25 feet D. 9 feet

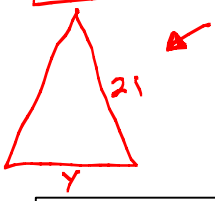


$\frac{21}{28} \times \frac{y}{12}$

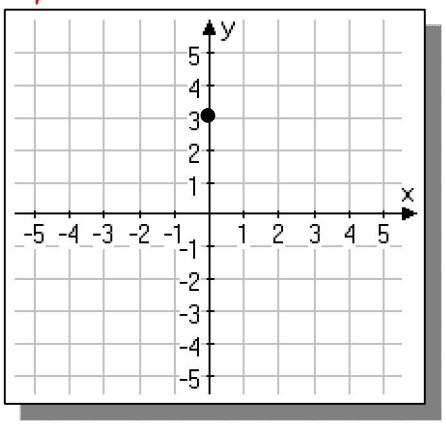
$\frac{28y}{28} = \frac{252}{28}$

$y = 9$

```
21*12
252
252/28
9
```

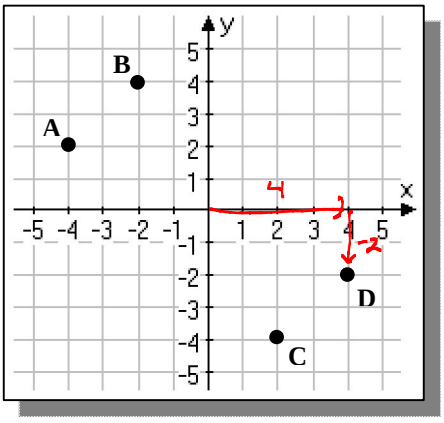


15. Which of the following points is graphed at the right?



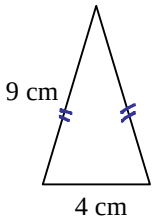
A. (3,0) B. (0,3)
C. (–3,0) D. (0,–3)

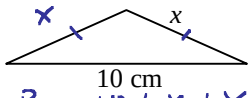
16. Which point is plotted at the coordinates (4, –2)



A. **A** B. **B**
C. **C** D. **D**

17. The perimeters of the two isosceles triangles are the same. What is the length of the side of length labeled "x"?



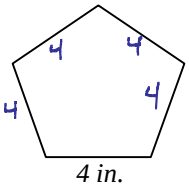


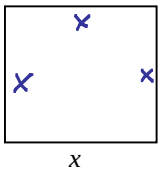
A. 3 cm B. 3.6 cm
C. 4.4 cm D. 6 cm

$P = 4+9+9$
$= 22\text{cm}$

$P = 10+x+x$
$22 = 10+2x$
$-10 \quad -10$
$\frac{12}{2} = \frac{2x}{2}$
$6 = x$

18. A regular pentagon has a side of length 4 inches. A square has the exact same perimeter as the pentagon. How long is each side of the square?





A. 2.5 cm B. 10 cm
C. 5 cm D. 20 cm

$P = 5 \cdot 4$
$= 20\text{in}$

$P = 4x$
$\frac{20}{4} = \frac{4x}{4}$
$5 = x$

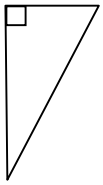
19. A Marker with its cap on is most like a:

A. sphere B. cone C. line D. cylinder

20. The right side and top side of a piece of paper are:

A. parallel B. perpendicular C. collinear D. skew

21. A triangular support piece for a shelf was created (shown at the right). Describe this triangle. BY "APPEARANCE"



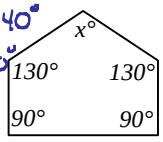
A. equilateral B. isosceles C. scalene D. acute

22. Angle A and angle B are supplementary. If the measure of angle A is 50° then the measure of angle B should be: $m\angle A + m\angle B = 180°$
$50° + m\angle B = 180°$

A. 40° B. 50° C. 130° D. 310°

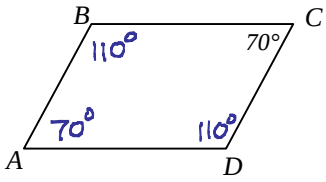
23. A person created the base home plate for a kickball game. What is the measure of the unknown angle?

$90° + 130° + 90° + 130° + x = 540°$
$440° + x = 540°$



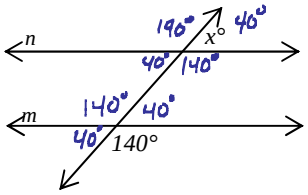
A. 80° B. 90° C. 100° D. 130°

24. Find the measure of angle A if the following is a parallelogram.



A. 20° B. 70° C. 110° D. 290°

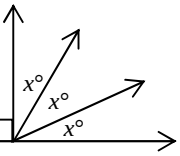
25. Lines "m" and "n" are parallel. Find the measure of the unknown angle x.



A. 20°
B. 40°
C. 140°
D. 220°

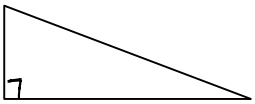
26. Find the measure of angle x.

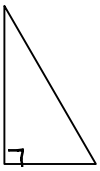
$90 + x + x + x = 180$
$90 + 3x = 180$
$-90 \quad -90$
$\frac{3x}{3} = \frac{90}{3}$
$x = 30$



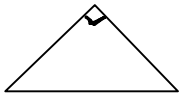
A. 30°
B. 40°
C. 60°
D. 90°

27. For which shape below would the Pythagorean Theorem **NOT** work?

A. 

B. 

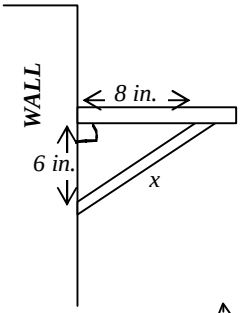
← ASSUMING BY APPEARANCE THAT ANGLES THAT LOOK LIKE 90° ARE RIGHT ANGLES.

C. 

D. 

28. Find the unknown length of the support beam.

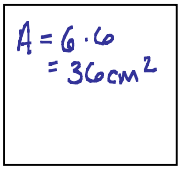
$a^2 + b^2 = c^2$
$6^2 + 8^2 = c^2$
$36 + 64 = c^2$
$\sqrt{100} = \sqrt{c^2}$
$10 = c$

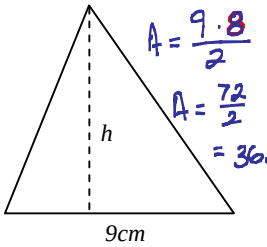


A. 7 in.
B. 12 in.
C. 10 in.
D. 24 in.

29. If the area of the triangle and square are the same, what is the height of the triangle?

$A = 6 \cdot 6$
$= 36 cm^2$

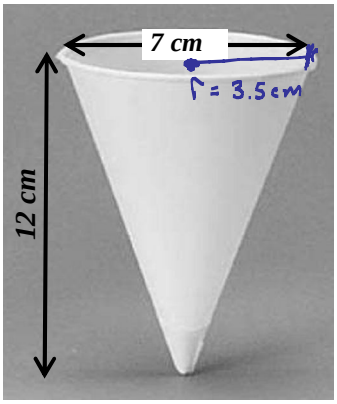




$A = \frac{9 \cdot 8}{2}$
$A = \frac{72}{2}$
$= 36 cm$

A. 4 cm
B. 8 cm
C. 6 cm
D. 10 cm

30. Find the volume of the paper cup if a cone's volume can be found using the following formula $V = \frac{\pi \cdot r^2 \cdot h}{3}$ (use $\pi = 3.14$).



A. 87.9 cm^3
B. 153.9 cm^3
C. 615.4 cm^3
D. 1055 cm^3

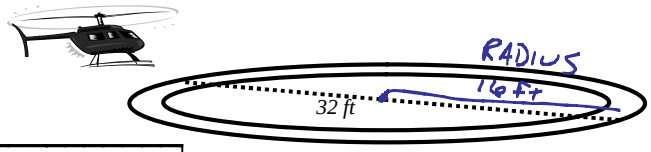
```
(3.14*3.5²*12)/3
                153.86
```

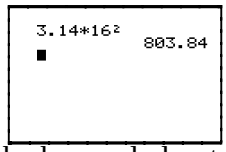
$V = \frac{(3.14)(3.5)^2(12)}{3}$
$= 153.86 cm^3$

31. A circular helicopter pad needs to be painted with some expensive reflective paint. The person painting needs to know how much area she has to paint. What is the area of the of the helicopter pad if it has a 32 foot diameter?

A. 100.53 ft^2
B. 201.06 ft^2
C. 803.84 ft^2
D. 3215.36 ft^2

$A = \pi \cdot r^2$
$= (3.14)(16^2)$
$= 803.84\ ft^2$

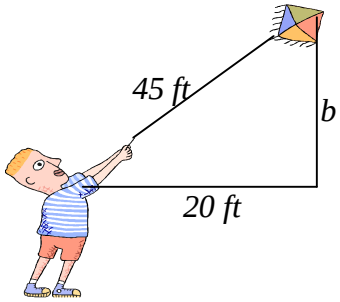


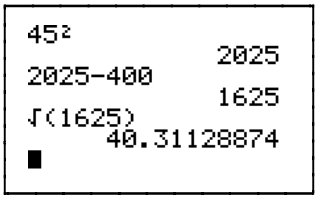


32. Jack is flying a kite and has realized that he has reeled out a total of 45 feet of string and the kite is 20 feet away from him horizontally. How high is the kite up in the air?

A. 20 ft
B. 25 ft
C. 40.3 ft
D. 49.24 ft

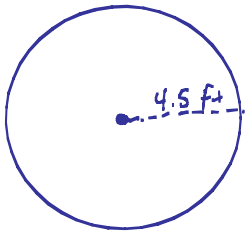
$a^2 + b^2 = c^2$
$20^2 + b^2 = 45^2$
$400 + b^2 = 2025$
$-400 \quad -400$
$b^2 = 1625$
$\sqrt{b^2} = \sqrt{1625}$
$b \approx 40.3\ ft$



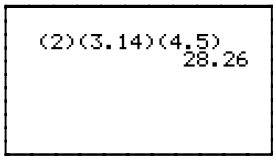


33. A person is buying some lace to put around a circular tablecloth. The tablecloth has a radius of 4.5 feet. How much lace should she purchase?

A. 28.27 ft
B. 56.55 ft
C. 63.62 ft
D. 254.47 ft



$C = 2\pi r$
$= 2(3.14)(4.5)$
$= 28.26\ ft$



34. A huge cylindrical column that holds up a building is going to be made of concrete. The post is 19 feet tall and has a radius of 3 feet. A concrete supplier sells cubic yards of concrete for $57. What will the contractor need to determine to tell the supplier how much concrete he needs?

A. Length
B. Area
C. Volume
D. Surface