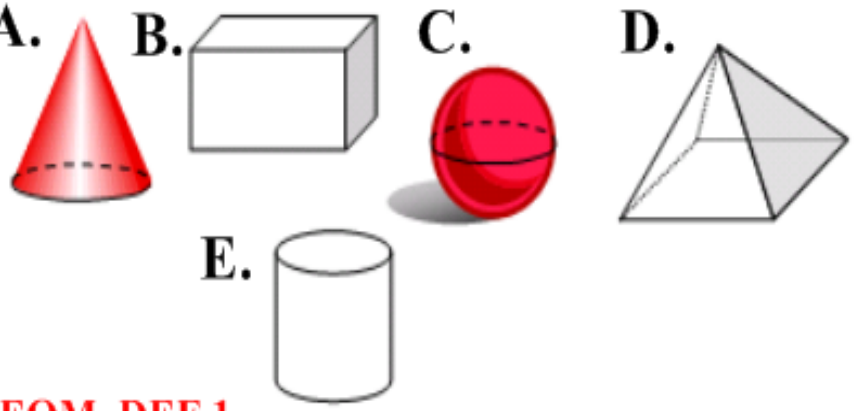
1. Describe Each Solid.

A. B. C. D.

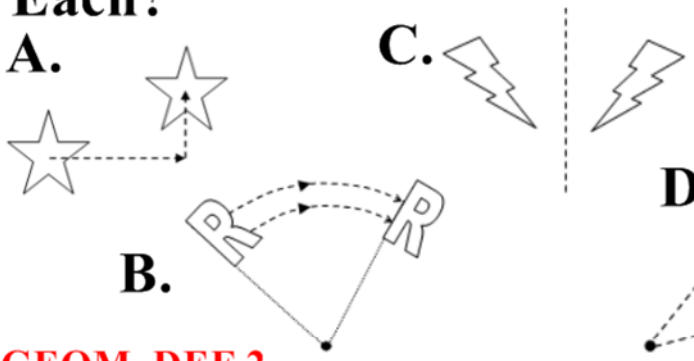


E.

GEOM. DEF 1

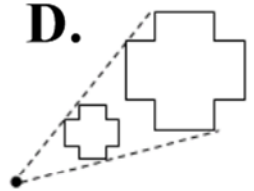
2. What Type of Transformation is Each?

A. C.



B.

D.



GEOM. DEF 2

3. CELSIUS TEMPERATURES

a. Describe the temperature of a hot day.

b. Describe the temperature of a cold day.

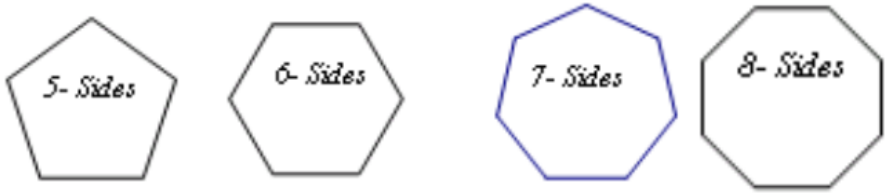
c. Describe a temperature for cooking food.

d. Describe a temperature of a freezer.

GEOM. DEF 3

4. What is the name of each polygon?

A. B. C. D.



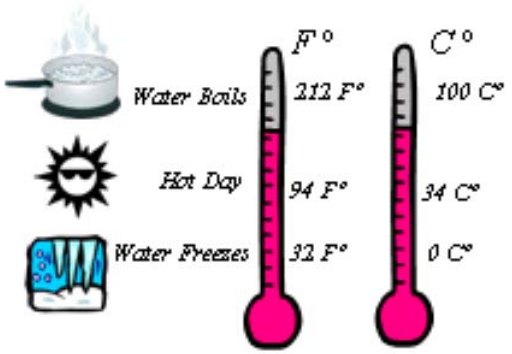
GEOM DEF 4

A. Translation - Just sliding it around
B. Rotation - Turning around a point
C. Reflection - reflecting through a mirror
D. Dilation -object gets big or small through a point.

A. Cone
B. Rectangular Prism
C. Sphere
D. Pyramid
E. Cylinder

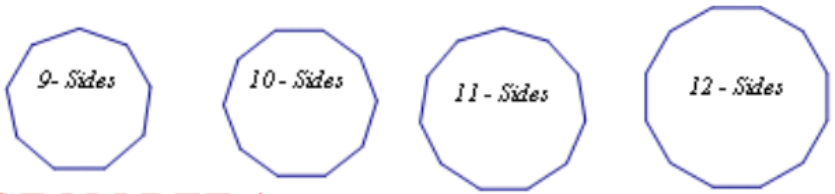
A. Pentagon (PENTA -5)
B. Hexagon (HEXA - 6)
C. Heptagon (HEPTA - 7)
D. Octagon (OCTA - 8)

a. 34° C
b. 3°C
c. 125° C
d. -5°C



4. What is the name of each polygon?

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



GEOM DEF 4

5. Classify each Triangle based on its sides.

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

GEOM DEF. 5

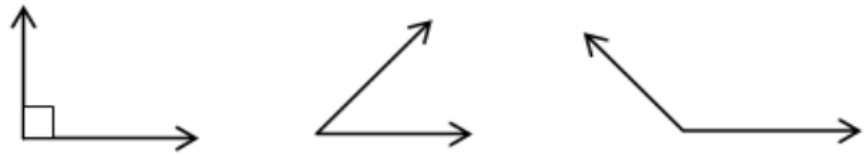
5. Classify each Triangle based on its angles.

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

GEOM DEF. 5

6. Describe Each Angle.

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



GEOM. DEF 6

A. Scalene Triangle - No Equal Sides
B. Isosceles Triangle - 2 Equal Sides
C. Equillateral Triangle - All Equal Sides

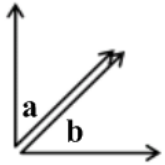
A. Nonagon (Nona/Nov -9)
B. Decagon (Deca - 10)
C. Undecagon (Undeca -11)
D. Dodecagon (Dodeca - 12)

A. Right Angle - Exactly 90°
B. Acute Angle - Less than 90°
C. Obtuse Angle - Greater than 90°

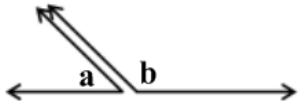
A. Right Triangle - Has One Right Angle
B. Acute Triangle - All Angles are Acute (less than 90°)
C. Obtuse Triangle - Has One Obtuse Angle (greater than 90°)

7. Describe Each Pair of Angles.

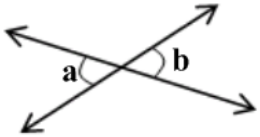
A.



B.



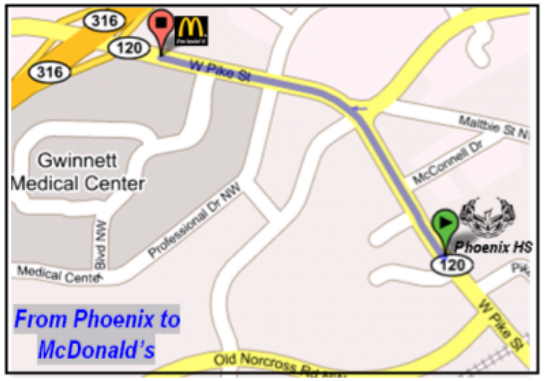
C.



GEOM. DEF 7

8. Which is about 1m, 1cm, 1Km, and 1mm?

A. Distance from Phoenix HS to McDonald's



B. Thickness of Fingernail

C. The Length of a Fly

D. The Width of a Door

GEOM. DEF 8

9. What is an approximate metric mass of each?

A.

B.

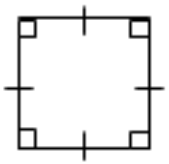
C.

D.

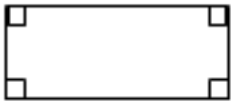
GEOM. DEF 9

10. Describe Each of the following Quadrillaterals.

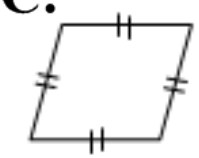
A.



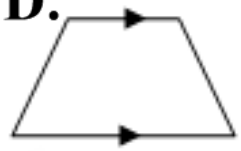
B.



C.

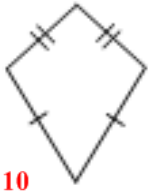


D.



E.

F.



GEOM. DEF 10

A. Phoenix to McDonalds ≈ 1 km
B. Width of a Finger Nail ≈ 1 mm
C. Length of a Fly ≈ 1 cm
D. Width of a Door ≈ 1 m

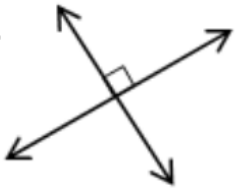
A. Complementary Angles
(2 angles that sum to 90°)
B. SUpplementary Angles
(2 angles that sum to 180°)
C. Vertical Angles
(2 angles across from each other and =)

A. Square- all equal sides, all right angles
B. Rectangle - all right angles
C. Rhombus - all equal sides
D. Trapezoid - only 1 set of parallel sides
E. Parallelogram - 2 sets of parallel sides
F. Kite - 2 sets of consecutive congruent sides

A. A book ≈ 1 Kg to 2 Kg
B. A student ≈ 50 Kg to 70 Kg
C. A bag of chips ≈ 80 g
D. A paper clip ≈ 1g

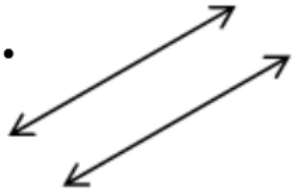
11. Describe Each Set of Lines.

A.



B.

C.

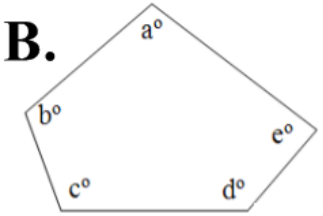


D.

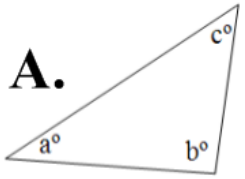
GEOM. DEF 11

12. What is the sum of the interior angles of each polygon?

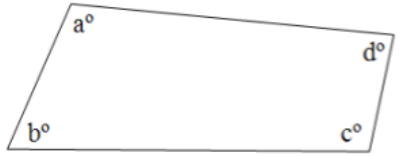
B.



A.

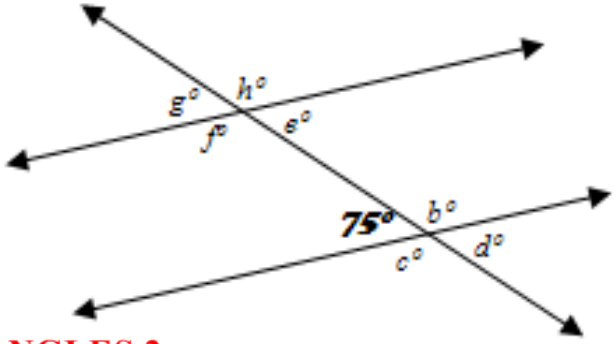


C.



GEOM. ANGLES 1

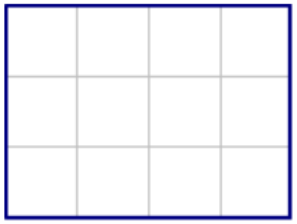
13. What are measures of unknown angles?



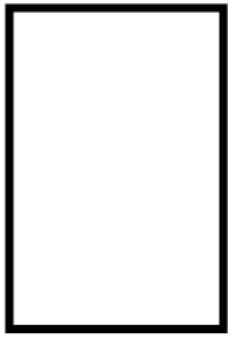
GEOM. ANGLES 2

14. What is the Perimeter and Area of each shape?

A.



B.

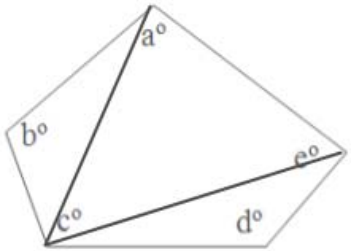


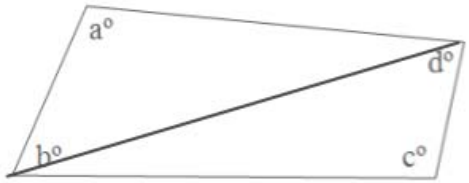
GEOM. AREA 1

A. 180°

B. 540°

C. 360°





A. Perpendicular Lines - make a right angle
B. Collinear Lines - share the same space
C. Parallel Lines - lines in the same plane that never intersect
D. Intersecting Lines - lines that intersect

A. Perimeter = 14 units
Area = 12 square units

$\angle d°, \angle g°, \angle e° = 75°$

B. Perimeter = 34 units
Area = 60 square units

$\angle b°, \angle c°, \angle h°, \angle f° = 105°$

1

15. Given the perimeter of the following rectangle is 30 cm, what is the area?

12 cm

GEOM. AREA 2

16. SIMPLIFY the following algebraic expressions

A. $5x + x$

B. $4a + 3 - 2b + 4a + 2b$

C. $-3y - (6 - 5y)$

ALGEBRA SKILL 1

17. Describe each as COMUTATIVE, ASSOCIATIVE, or DISTRIBUTIVE

A. $a + (b + c) = (a + b) + c$

B. $(5 + 3) + x = x + (5 + 3)$

C. $5 - 2(4x + 3) = 5 - 8x - 6$

ALGEBRA DEF. 1

18. Describe each as *Multiplication or Addition* <u>AND</u> *Identity or Inverse*.

A. $\frac{2}{3} \times \frac{3}{2} = 1$

B. $x + 0 = x$

C. $-5 \cdot 1 = -5$

D. $-\frac{4}{3} + \frac{4}{3} = 0$

ALGEBRA DEF. 2

SIMPLIFY the following algebraic expressions

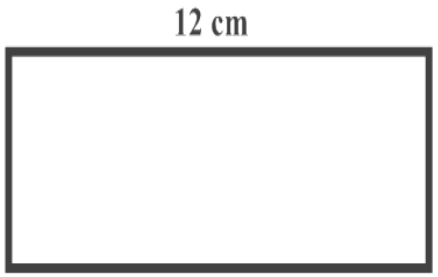
A. $5x + x = \boxed{6x}$

B. $4a + 3 - 2b + 4a + 2b$

$8a + 0b + 3 = \boxed{8a + 3}$

C. $-3y - (6 - 5y) = -3y - 6 + 5y$

$\boxed{2y - 6}$



Since 12 + 12 = 24, 6 cm are remaining to account for the other two sides. So, each will need to be 3 cm

Which would suggest the area is 36 sq cm.

Describe each as *Multiplication or Addition* AND *Identity or Inverse*.

A. $\frac{2}{3} \times \frac{3}{2} = 1$

Multiplicative Inverse

B. $x + 0 = x$

Additive Identity

C. $-5 \cdot 1 = -5$

Multiplicative Identity

D. $-\frac{4}{3} + \frac{4}{3} = 0$

Additive Inverse

Describe each as COMUTATIVE, ASSOCIATIVE, or DISTRIBUTIVE

A. $a + (b + c) = (a + b) + c$ **:ASSOCIATIVE**

B. $(5 + 3) + x = x + (5 + 3)$ **:COMUTATIVE**

C. $5 - 2(4x + 3) = 5 - 8x - 6$ **:DISTRIBUTIVE**

19. Which of the following would represent the Commutative Property?

A. Cooking your dinner and then eating your dinner
B. Putting your jacket and hat on before going outside
C. Turning on the water and washing your hands

ALGEBRA DEF. 3

20. In each case, which would be the next mathematical operation?

A. $6^2 - 4(3-8)$

B. $-2(5)+3^4$

C. $-2+12\div 4$

ALGEBRA SKILL 2

21. Give the mathematical expression or equation described by each statement.

A. Five increased by a number.

B. Three less than twice a number is one.

C. Four times the difference of a number and two is twenty.

ALGEBRA SKILL. 3

22. Tell which words suggest addition, subtraction, multiplication, or division?

A. more	B. less	C. increased
D. total	E. sum	F. difference
G. product	H. quotient	I. twice
J. triple	K. decreased	L. taken away
M. doubled	N. times	O. portioned
P. combined		

ALGEBRA DEF. 4

In each case, which would be the next mathematical operation?

A. $6^2 - 4(3-8) = 6^2 - 4(-5)$

B. $-2(5) + 3^4 = -2(5) + 81$

C. $-2 + 12 \div 4 = -2 + 3$

Order of Operations:

Parenthesis **E**xponents **M**ultiplication **D**ivision **A**ddition **S**ubtraction

Tell which words suggest addition, subtraction, multiplication, or division?

A. more : **(+)**	B. less: **(−)**	C. increased : **(+)**
D. total: **(+)**	E. sum : **(+)**	F. difference : **(−)**
G. product: **(×)**	H. quotient : **(÷)**	I. twice : **(× 2)**
J. triple: **(× 3)**	K. decreased: **(−)**	L. taken away: **(−)**
M. doubled : **(× 2)**	N. times : **(×)**	O. portioned: **(÷)**
P. combined : **(+)**		

Which of the following would represent the Commutative Property?

The literal Latin interpretation of the word COMMUTATIVE means "exchange between 2 things."

A. "Cooking your dinner and then eating your dinner" ≠ "Eating your dinner and then cooking your dinner"

B. "Putting your jacket and hat on before going outside" = "Putting your hat on and then your jacket on before going outside"

C. "Turning on the water and washing your hands" ≠ "Washing your hands and turning on the water"

Give the mathematical expression or equation described by each statement.

A. Five increased by a number.

5 + x

$5 + x$

B. Three less than twice a number is one.

2x − 3 = 1

$2x - 3 = 1$

D. Four times the difference of a number and two is twenty.

$4(x-2) = 20$

23. Which would be the most likely next algebraic step required to solve the following equations?

A. $8x = 40$

B. $6x - 4 = 14$

C. $3x + 2 - 5x = 12$

ALGEBRA SKILL 4

24. Using ratios solve the following

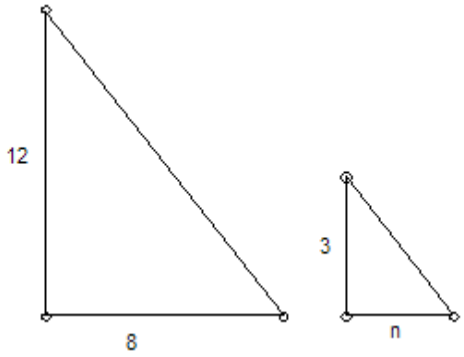
a. A crew of 6 painters paint 4 houses in a week. At this rate, how many painters would be needed to paint 10 houses in a week?

b. A student just bought a new MP3 player. The player has 512 megabytes of space. So, far the student has saved 30 songs on the player which has used 140 megabytes of space. At this rate, how many songs will the MP3 player hold?

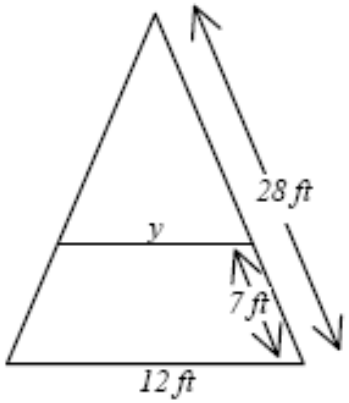
ALGEBRA SKILL 5

25. Using ratios and assuming the figures are similar find the unknown side.

A.



B.

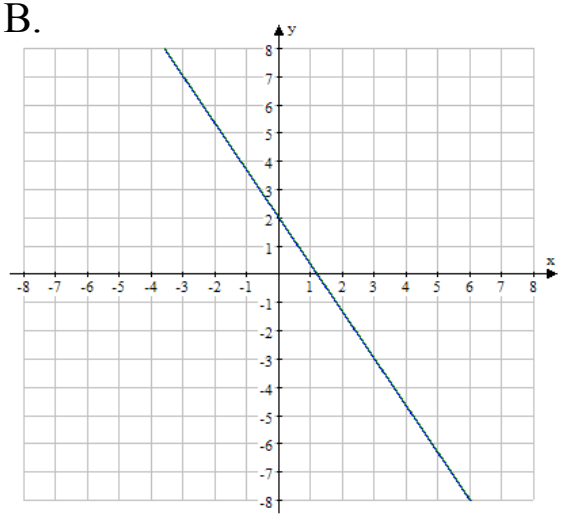


ALGEBRA/GEOM SKILL. 6

26. Give the equation of the following lines in SLOPE-INTERCEPT form.

A. A line with a slope of ½ and a y-intercept of 5.

B.



ALGEBRA SKILL. 7

A crew of 6 painters paint 4 houses in a week. At this rate, how many painters would be needed to paint 10 houses in a week?

$$\frac{painters}{houses} : \frac{6}{4} \times \frac{x}{10}$$

$$4x = 60 \qquad \boxed{x = 15}$$

A student just bought a new MP3 player. The player has 512 megabytes of space. So, far the student has saved 30 songs on the player which has used 140 megabytes of space. At this rate, how many songs will the MP3 player hold?

$$\frac{songs}{space} : \frac{30}{140} \times \frac{x}{512}$$

$$140x = 15360 \qquad \boxed{x \approx 110}$$

Which would be the most likely next algebraic step required to solve the following equations?

A. $8x = 40$; $\frac{8x}{8} = \frac{40}{8}$ **(DIVISION)**

B. $6x - 4 = 14$

$+4 \quad +4$

(ADDITION)

C. $3x + 2 - 5x = 12$ **(COMBINE LIKE TERMS)**

$$-2x + 2 = 12$$

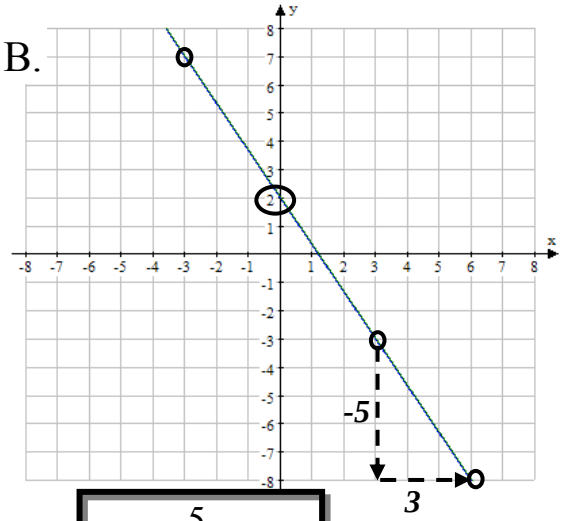
A. A line with a slope of ½ and a y-intercept of 5.

$y = mx + b$

SLOPE y-intercept

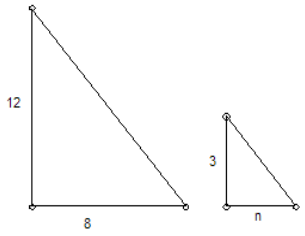
$\boxed{y = ½\,x + 5}$

B.



$\boxed{y = -\frac{5}{3}x + 2}$

A.

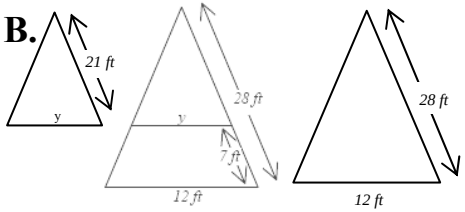


$$\frac{big\ \Delta}{small\ \Delta} : \frac{12}{3} \times \frac{8}{n}$$

$$24 = 12n$$

$$\boxed{2 = n}$$

B.



$$\frac{big\ \Delta}{small\ \Delta} : \frac{28}{21} \times \frac{12}{y}$$

$$252 = 28y$$

$$\boxed{9 = y}$$

27. Which of the following demonstrates how to find RANGE, MEAN, MEDIAN, and MODE for the data set { 3, 8, 11, 3, 15}?

A. $\underline{3},8,11,\underline{3},15$

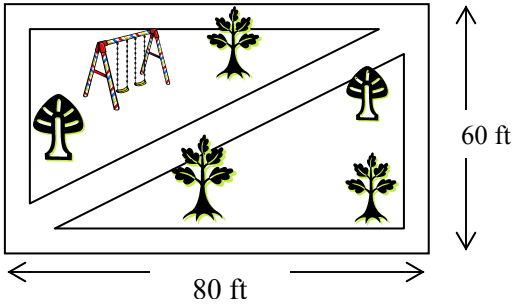
B. ~~3,3,(8),11,15~~

C. $\dfrac{3+8+11+3+15}{5}$

D. $15-3$

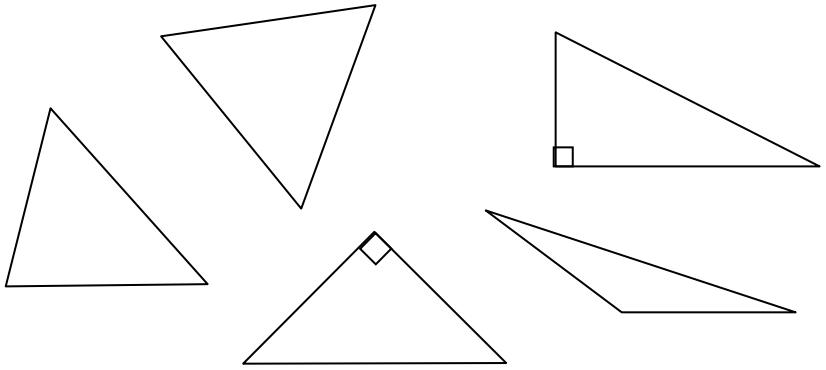
DATA ANALYSIS DEF. 1

28. A park is located on a rectangular city block. A path-way goes from one corner to the opposite corner. If the dimensions of the rectangle are 80 feet by 60 feet, how long is the diagonal path-way?



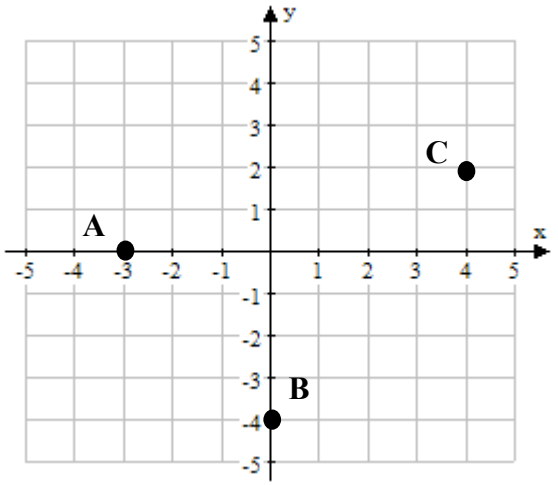
GEOMETRY SKILL 1

29. For which of the following triangles will the formula $a^2 + b^2 = c^2$ work correctly?

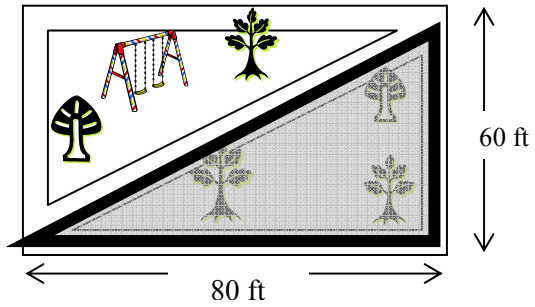


GEOMETRY SKILL 2

30. Give the coordinates of each point.



GEOMETRY SKILL 3

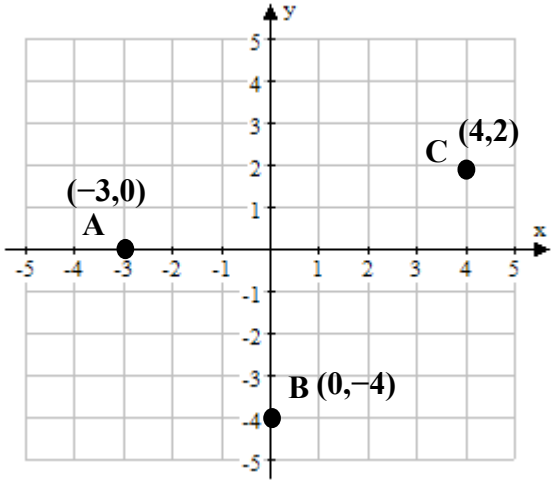


$60^2 + 80^2 = c^2$

$3600 + 6400 = c^2$

$10000 = c^2$

$100 = c$



A. $3,8,11,3,15$

MODE

B. ~~$3,3,$~~ 8 ~~$,11,15$~~

MEDIAN

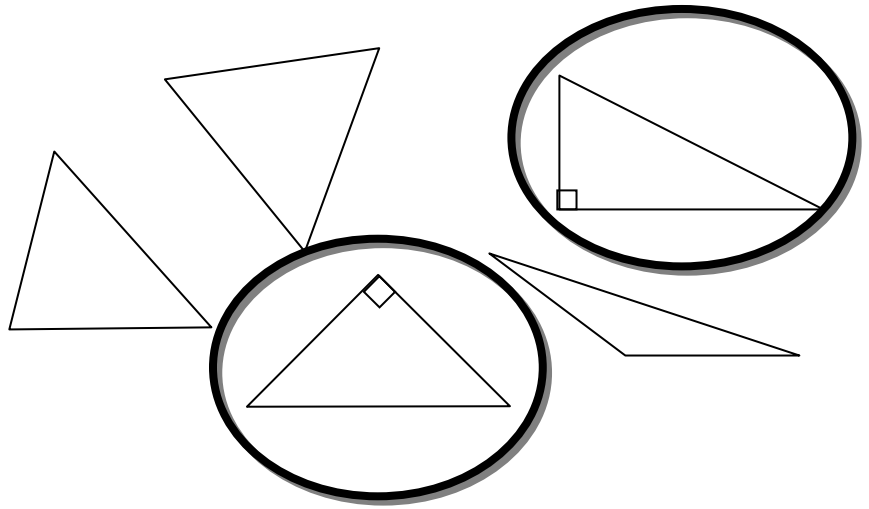
C. $\dfrac{3+8+11+3+15}{5}$

MEAN

D. $15-3$

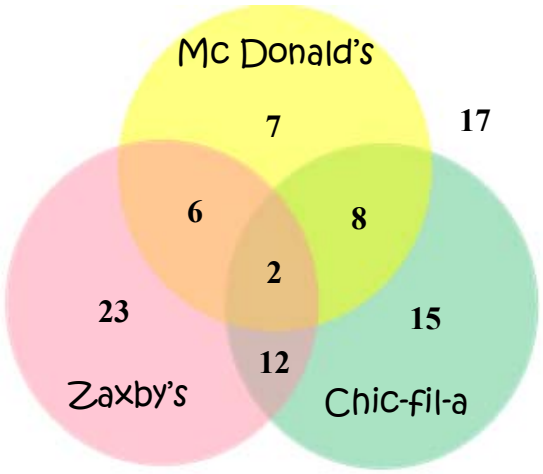
RANGE

The triangles must be right triangles.



31. Use the following VENN diagram that shows where a surveyed group of students ate over the last week.

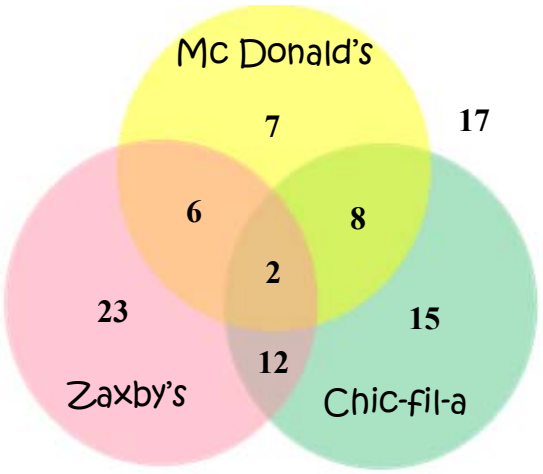
A. How many students ate at Chic-fil-a last week?



DATA ANALYSIS SKILL 1

32. Use the following VENN diagram that shows where a surveyed group of students ate over the last week.

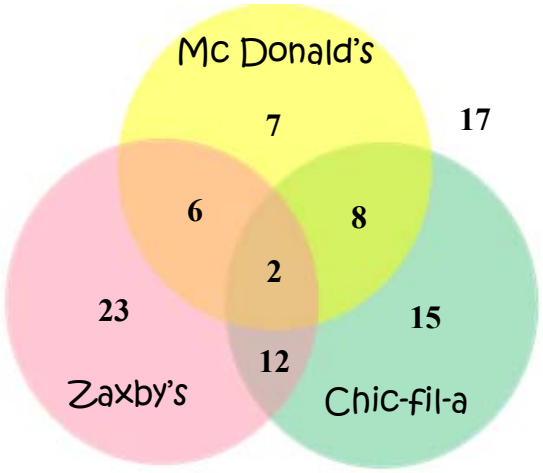
A. How many students ate at Zaxby's **and** Mc Donald's?



DATA ANALYSIS SKILL 2

33. Use the following VENN diagram that shows where a surveyed group of students ate over the last week.

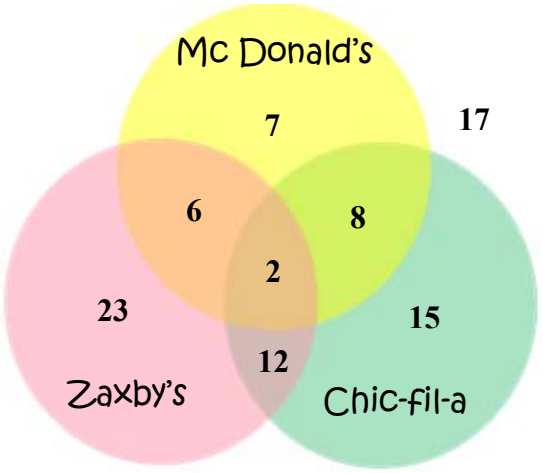
A. How many students ate at Chic-fil-a **or** Mc Donald's?



DATA ANALYSIS SKILL 3

34. Use the following VENN diagram that shows where a surveyed group of students ate over the last week.

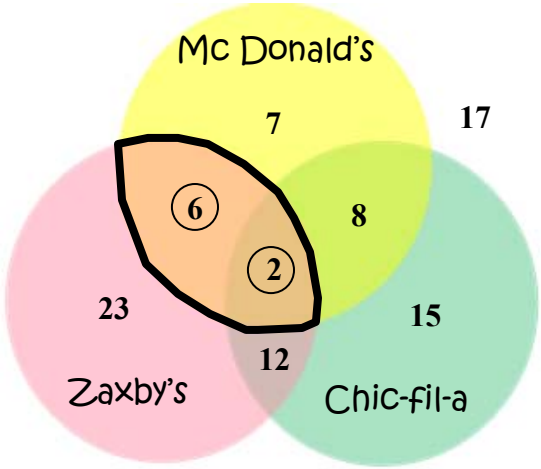
A. How many students ate at Chic-fil-a, Mc Donald's, **and** Zaxby's?



DATA ANALYSIS SKILL 4

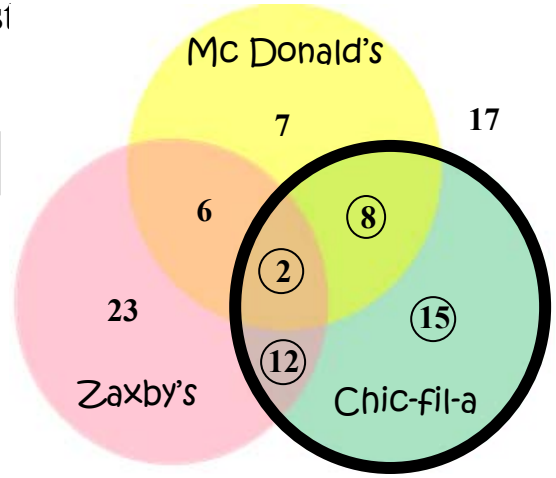
How many students ate at Zaxby's **and** Mc Donald's?

6 + 2 = 8



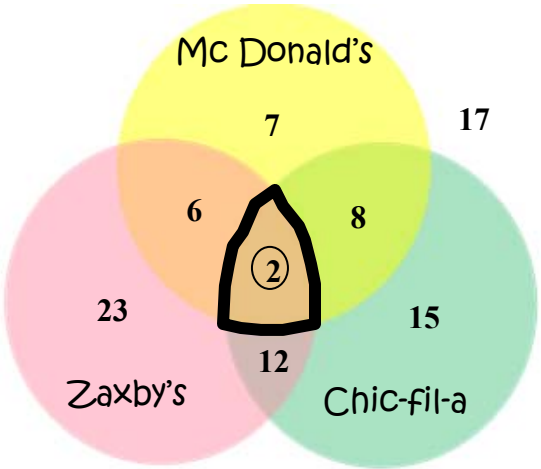
How many students ate at Chic-fil-a last week?

2+8+12+15 = 37



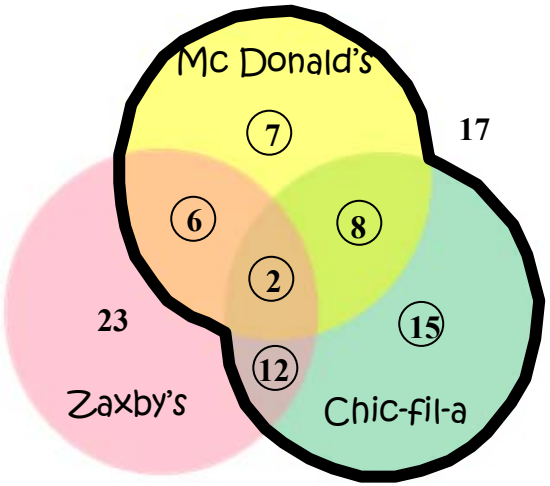
How many students ate at Chic-fil-a, Mc Donald's, **and** Zaxby's?

2

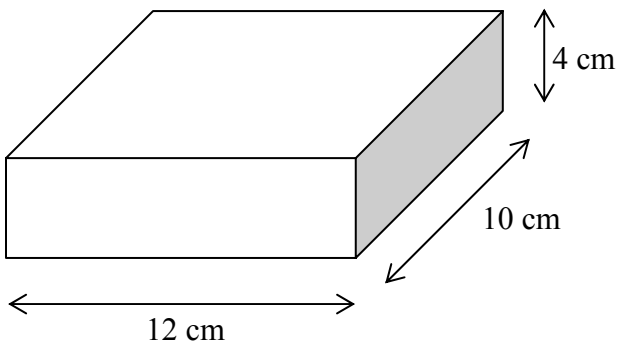


How many students ate at Chic-fil-a **or** Mc Donald's?

7+6+2+8+12+15= 50



35. How do you find the VOLUME of the following solids?



GEOMETRY SKILL 1

36. A DVD player was priced at $85.00 but the store was having a sale of 15% off the sales price. How much was the discount?

NUMBER & COMP SKILL2

37. Which type of graph would be the most appropriate to display the information for each of the following situations?

A. A school wants to show that they have 20% freshman, 30% sophomores, 35% juniors, and 15% seniors.

B. A company wants to show the value of their stock over the last 12 months.

C. A car manufacturer wants to compare their car's fuel economy to other cars in the same class.

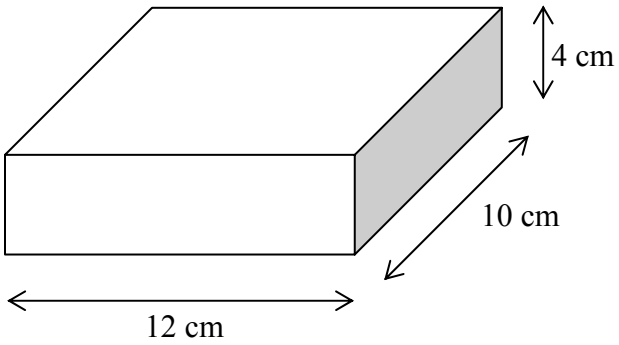
DATA ANALYSIS SKILL 4

38. In a Valentine's box of candy there were 4 strawberry, 5 orange, and 3 lemon chocolate covered creams. If they all look identical what is the probability of picking one and getting a lemon flavored chocolate?

DATA ANALYSIS SKILL 5

A DVD player was priced at $85.00 but the store was having a sale of 15% off the sales price. How much was the discount?

$$\$85.00 \times 0.15 = \boxed{\$12.75}$$



Volume Rectangular Prism = Length × Width × Height

Volume = 12cm × 10 cm × 4 cm

$$\boxed{\text{Volume} = 480\ \text{cm}^3}$$

In a Valentine's box of candy there were 4 strawberry, 5 orange, and 3 lemon chocolate covered creams. If they all look identical what is the probability of picking one and getting a lemon flavored chocolate?

$$\frac{Desired\ \#}{Total\ \#} : \frac{Lemon}{Total} = \frac{3}{12} = \frac{1}{4} = 0.25 = 25\%$$

A. A school wants to show that they have 20% freshman, 30% sophomores, 35% juniors, and 15% seniors. **(Any composition of 100%)**

CIRCLE GRAPH

B. A company wants to show the value of their stock over the last 12 months. **(Any data over time)**

LINE GRAPH

C. A car manufacturer wants to compare their car's fuel economy to other cars in the same class. **(A comparison of data)**

BAR GRAPH

39. At a banquet, a person has a choice of three types of drinks (tea, water, soda). They have a choice of two salads (House, Caesar). They have a choice of 2 main entrées (chicken, beef). Create a TREE DIAGRAM showing all of the possible meals.

DATA ANALYSIS SKILL 6

40. What is the probability of flipping 3 coins and having all of them land on tails?

41. What is the probability of flipping 3 coins and having two coins land on heads? (hint: create a tree diagram and count them)

DATA ANALYSIS SKILL 7

42. In which of situations below would you use APPROXIMATE numbers and in which situations would you use EXACT numbers?

A. A person checks his wallet after dinner to see if he has enough for money for the movies.

B. An electrician bills a customer after installing a ceiling fan

C. A caterer is trying to determine how many dinner rolls to order for an event scheduled for next week.

D. A person is filling out their federal income tax forms.

NUMBER & COMP SKILL2

43. How would you solve and graph the inequality shown below?

$$2x + 5 > 13$$

44. A person is on vacation. They have $450 to spend. The hotel charges $60 per night. The person is staying 3 nights. Write an inequality showing how much the person can spend on the rest of the vacation for gas, meals, and fun.

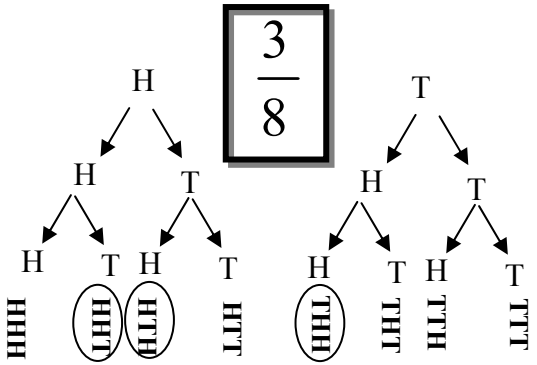
ALGEBRA SKILL 6

What is the probability of flipping 3 coins and having all of them land on tails?

$\frac{1}{8}$

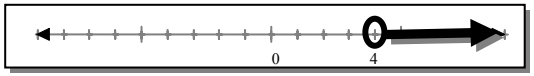
What is the probability of flipping 3 coins and having two coins land on heads? (hint: create a tree diagram and count them)

$\frac{3}{8}$



$$2x+5>13$$
$$-5\quad -5$$
$$2x>8$$

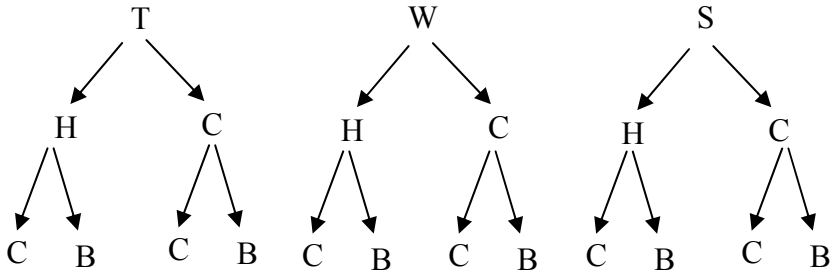
$$\frac{2x}{2}>\frac{8}{2}$$
$$x>4$$



A person is on vacation. They have $450 to spend. The hotel charges $60 per night. The person is staying 3 nights. Write an inequality showing how much the person can spend on the rest of the vacation for gas, meals, and fun.

$$x+3(60)\le 450$$
$$x\le 270$$

At a banquet, a person has a choice of three types of drinks (tea, water, soda). They have a choice of two salads (House, Ceaser). They have a choice of 2 main entrées (chicken, beef). Create a TREE DIAGRAM showing all of the possible meals.



A. A person checks his wallet after dinner to see if he has enough for money for the movies.

APPROXIMATE – Future Prediction

B. An electrician bills a customer after installing a ceiling fan

EXACT – Present or Past Specific Amount

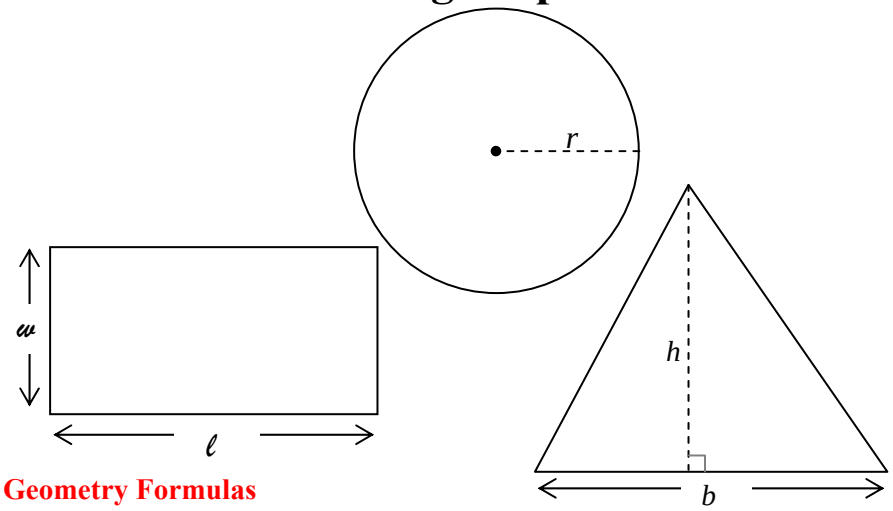
C. A caterer is trying to determine how many dinner rolls to order for an event scheduled for next week.

APPROXIMATE – Future Prediction

D. A person is filling out their federal income tax forms.

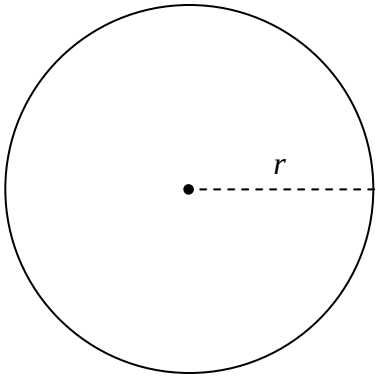
EXACT – Present or Past Specific Amount

45. What is the formula for area for each of the following shapes?



Geometry Formulas

46. What is the formula for the circumference of a circle?



Geometry Formulas

$C = 2 \cdot \pi \cdot r$