

# 5<sup>th</sup> Grade MEAP Released Items - Mathematics

## Based on 4<sup>th</sup> Grade GLCE's

By the end of fourth grade students will have consolidated addition and subtraction of whole numbers, and will have done much in multiplication and division of whole numbers. Work in number also extends to fractions and decimal fractions, using limited sets of fractions as the basis for building meaning for equivalent fractions, addition, subtraction, and fraction as part of a set of objects. Work in measurement becomes more sophisticated, with emphasis on units and conversion within systems of units. In order to allow for the development of number and Operations, there are relatively few expectations in Geometry and Data and Probability in Grade 4.

## NOTES

Items are arranged to match the way the items are ordered in the *Item Analysis Report* (which coincides with the way the GLCEs are arranged in the *State-Assessed Mathematics GLCEs* document.).

The following GLCE designations are provided:

Core: Content that is most commonly taught at grade level. **[Core]**

Core,  
Non-Calculator Item: Items where calculators are not allowed. **[Core-NC]**

Extended Core: Content commonly taught at grade level but narrower in scope and/or supportive to the core. **[Ext]**

Future Core: Content expectations previously taught at a higher grade level; will become core content in 2009-10. **[Fut]**

Not Assessed at the  
State Level **[NASL]**: GLCEs that are part of the State Curriculum, but not assessed on the MEAP. **[NASL]**

## Number and Operations

### Understand and use number notation and place value:

**N.ME.04.01** Read and write numbers to 1,000,000; relate them to the quantities they represent; compare and order. **[Ext]**

**(No questions associated with this extended core GLCE.)**

**N.ME.04.02** Compose and decompose numbers using place value to 1,000,000's, e.g., 25,068 is 2 ten thousands, 5 thousands, 0 hundreds, 6 tens, and 8 ones. **[Ext]**

**58** Which list shows the numbers in order from *least to greatest*?

- A** 3,800,902 3,808,290 4,808,092 4,880,901
- B** 4,880,901 4,808,092 3,808,290 3,800,902
- C** 4,808,092 3,808,290 4,880,901 3,800,902
- D** 3,800,902 4,808,092 3,808,290 4,880,901

Answer: A

**59** Which is equal to 4,002?

- A** 4 ones and 2 ones
- B** 4 hundreds and 2 ones
- C** 4 thousands and 2 ones
- D** 4 ones and 2 thousands

Answer: C

**N.ME.04.03** Understand the magnitude of numbers up to 1,000,000; recognize the place value's of numbers, and the relationship of each place value to the place to its right, e.g., 1,000 is 10 hundreds.

**[Ext]**

**(No questions associated with this extended core GLCE.)**

### Use factors and multiples:

**N.ME.04.04** Find all factors of a whole number up to 50, and list factor pairs. **[Ext]**

**(No questions associated with this extended core GLCE.)**

**N.ME.04.05** List the first ten multiples of a given one-digit whole number; determine if a whole number is a multiple of a given one-digit whole number, and if a one-digit number is a factor of a given whole number. **[Core - NC]**

**10** Which list shows the first five positive multiples of 2?

- A** 2, 3, 4, 5, 6
- B** 2, 4, 6, 8, 10
- C** 2, 20, 200, 2,000, 20,000
- D** 2, 22, 222, 2,222, 22,222

Answer: B

**11** Which of the following is equal to 24?

- A**  $4 \times 2 \times 3$
- B**  $2 \times 3 \times 4 \times 6$
- C**  $2 \times 3$
- D**  $4 \times 3$

Answer: A

**12** Which number is a factor of 23?

- A** 1
- B** 2
- C** 3
- D** 5

Answer: A

**N.MR.04.06** Know that some numbers, including 2, 3, 5, 7, and 11 have exactly two factors (1 and the number itself) and are called prime numbers. **[Ext]**

**(No questions associated with this extended core GLCE.)**

**N.MR.04.07** Solve problems about factors and multiples, e.g., since  $100 = 4 \times 25$ , and  $200 = 2 \times 100$ , then  $200 = 2 \times 4 \times 25 = 8 \times 25$ . **[Core - NC]**

- 4 The number 144 can be represented by a  $12 \times 12$  square grid. Which of the following is also a square number?
- A 39
  - B 50
  - C 70
  - D 81

Answer: D

- 5 Which of these groups can be divided evenly into smaller groups of students?
- A 21 students
  - B 19 students
  - C 17 students
  - D 13 students

Answer: A

- 6 Which of the following is **NOT** equal to 32?
- A  $16 \times 2$
  - B  $8 \times 4$
  - C  $1 \times 32$
  - D  $16 \times 16$

Answer: D

## Add and subtract whole numbers:

**N.FL.04.08** Add and subtract whole numbers fluently. [Ext - NC]

**60** A fruit stand sold 502 peaches, 43 watermelons, and 910 apples. How many pieces of fruit were sold in all?

- A** 186
- B** 654
- C** 1,005
- D** 1,455

Answer: D

## Multiply and divide whole numbers:

**N.ME.04.09** Multiply two-digit numbers by 2, 3, 4, and 5, using the distributive property, e.g.,  $21 \times 3 = (1 + 20) \times 3 = (1 \times 3) + (20 \times 3) = 3 + 60 = 63$ . [Core - NC]

**7** Which expression is equal to  $83 \times 5$ ?

- A**  $8 \times (3 + 5)$
- B**  $5 \times (8 + 3)$
- C**  $5 \times (80 + 3)$
- D**  $80 \times (3 + 5)$

Answer: C

**8** Which expression is equal to  $3 \times 49$ ?

- A**  $3 \times (4 + 9)$
- B**  $3 + (40 \times 9)$
- C**  $3 \times (40 + 9)$
- D**  $(3 \times 4) + (3 \times 9)$

Answer: C

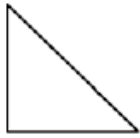
**9** Which is equal to  $(4 \times 8) + (4 \times 60)$ ?

- A**  $4 \times (60 + 8)$
- B**  $8 \times (60 + 4)$
- C**  $12 \times (60 + 4)$
- D**  $16 \times (60 + 8)$

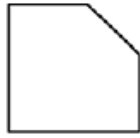
Answer: A

**N.FL.04.10** Multiply fluently any whole number by a one-digit number, and a three-digit number by a two-digit number; for two-digit by one-digit multiplication, use distributive property to develop meaning for the algorithm. **[Ext]**

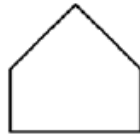
**61** Which shape appears to contain exactly 3 right angles?



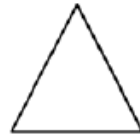
**I**



**II**



**III**



**IV**

- A** I
- B** II
- C** III
- D** IV

Answer: B

**N.FL.04.11** Divide numbers up to four-digits by one-digit numbers and by 10. [Core - NC]

**16** Al sees this sign at a copy center.

1. *Copies cost 10¢ each.*
2. *Copy machines only take quarters.*
3. *Copy machines do NOT make change.  
If you make 1 copy, you will NOT get 15¢ back.*

What is the *least* number of copies Al can make without losing any money?

- A** 5
- B** 30
- C** 75
- D** 150

Answer: A

**17** What is the value of this expression?

$$420 \div 4$$

- A** 15
- B** 100
- C** 105
- D** 150

Answer: C

**18** There are 168 lunches to be shared equally among 3 fourth-grade classes. How many lunches will go to each class?

- A** 56
- B** 165
- C** 171
- D** 504

Answer: A

**N.FL.04.12** Find unknowns in equations such as  $a \div 10 = 25$ ;  $125 \div b = 25$  [**Core - NC**]

**13** Which value of  $y$  makes the number sentence true?

$$y \div 6 = 93$$

- A** 87
- B** 99
- C** 548
- D** 558

Answer: D

**14** What value of  $a$  makes the number sentence true?

$$100 \div a = 20$$

- A** 4
- B** 5
- C** 80
- D** 120

Answer: B

**15** Which value of  $g$  makes the number sentence true?

$$g \div 8 = 32$$

- A** 4
- B** 24
- C** 40
- D** 256

Answer: D

**N.MR.04.13** Use the relationship between multiplication and division to simplify computations and check results. [**Fut**]

**72** Which math problem can be checked using  $3 \times 6 = 18$ ?

- A**  $18 \times 3 =$
- B**  $18 + 3 =$
- C**  $18 \div 3 =$
- D**  $18 - 3 =$

Answer: C

**N.FL.04.14** Solve applied problems involving whole number multiplication and division. **[Ext]**  
**(No questions associated with this extended core GLCE.)**

**Read, interpret and compare decimal fractions:**

**N.ME.04.15** Read and interpret decimals up to two decimal places; relate to money and place value decomposition. **[Core]**

**20** Which fraction is equal to 0.44?

**A**  $\frac{4}{10}$

**B**  $\frac{44}{10}$

**C**  $\frac{4}{100}$

**D**  $\frac{44}{100}$

Answer: D

**21** What decimal part of one dollar is the sum of these coins?



**A** 2.00

**B** 0.20

**C** 0.02

**D** 0.22

Answer: B

**26** What is another way to write 0.7 inches?

**A**  $\frac{7}{10000}$  inches

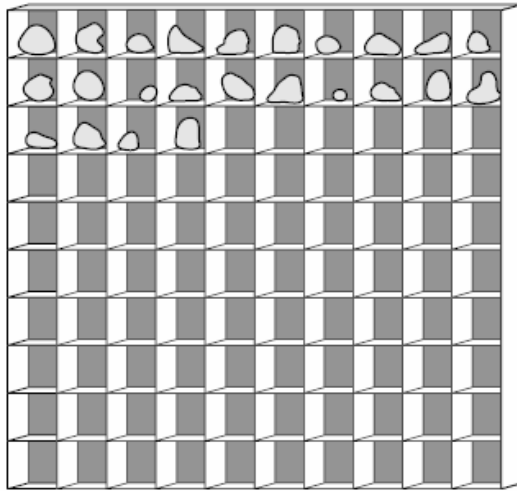
**B**  $\frac{7}{1000}$  inches

**C**  $\frac{7}{100}$  inches

**D**  $\frac{7}{10}$  inches

Answer: D

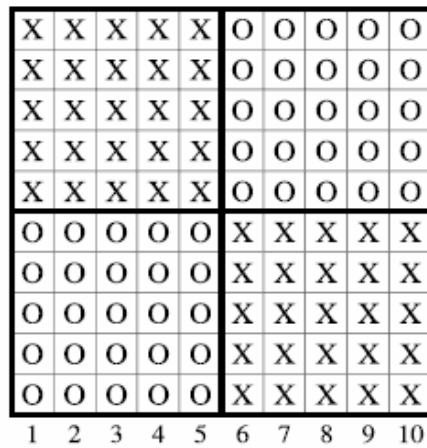
34 What decimal shows the part of this box that has rocks in the spaces?



- A 0.20
- B 0.24
- C 0.70
- D 0.76

Answer: B

51 The picture below shows the different parts of a blanket that will be made with red fabric and yellow fabric.



**KEY:**  
 O = yellow  
 X = red

What decimal represents the part of the blanket that will be red?

- A 0.50
- B 0.050
- C 5.0
- D 50.0

Answer: A

**N.ME.04.16** Know that terminating decimals represent fractions whose denominators are 10,  $10 \times 10$ ,  $10 \times 10 \times 10$ , etc. e.g., powers of 10. **[Fut]**

**73** Which is equal to 6.45?

- A**  $\frac{6}{45}$
- B**  $\frac{45}{100}$
- C**  $6\frac{45}{100}$
- D**  $6\frac{4}{5}$

Answer: C

**N.ME.04.17** Locate tenths and hundredths on a number line. **[Ext]**

**62** Which point on the number line below *best* represents 1.75?



- A** Point A
- B** Point B
- C** Point C
- D** Point D

Answer: D

**N.ME.04.18** Read, write, interpret, and compare decimals up to two decimal places. **[Ext]**  
**(No questions associated with this extended core GLCE.)**

**N.MR.04.19** Write tenths and hundredths in decimal and fraction forms, and know the decimal equivalents for halves and fourths. **[Core]**

**54** How is eighteen hundredths written in standard form?

- A** 0.018
- B** 0.18
- C** 18.00
- D** 1800

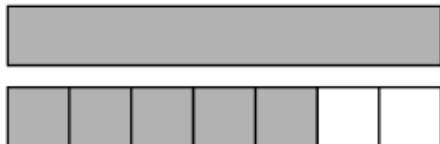
Answer: B

## Understand fractions:

**N.ME.04.20** Understand fractions as parts of a set of objects. **[Ext]**  
**(No questions associated with this extended core GLCE.)**

**N.MR.04.21** Explain why equivalent fractions are equal, using models such as fraction strips or the number line, for fractions with denominators of 12 or less, or equal to 100. **[Ext]**

**63** Which *best* describes the shaded part of the drawing below?



- A**  $\frac{3}{4}$
- B**  $\frac{6}{7}$
- C**  $1\frac{5}{8}$
- D**  $1\frac{5}{7}$

Answer: D

**N.MR.04.22** Locate and compare fractions on the number line, including improper fractions and mixed numbers with denominators of 12 or less. **[Core]**

- 28** Which of the following fractions would be located between points G and H on this number line?



- A**  $2\frac{1}{4}$
- B**  $3\frac{1}{4}$
- C** 4
- D**  $4\frac{1}{4}$

Answer: B

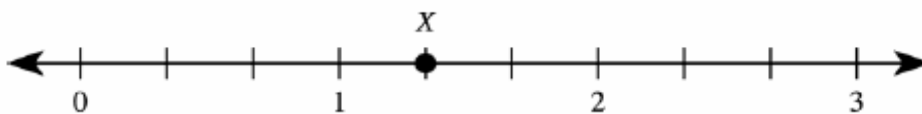
- 32** Which is *greater than* the value at point P?



- A**  $\frac{3}{4}$
- B** 1
- C**  $1\frac{1}{4}$
- D**  $1\frac{3}{4}$

Answer: D

- 52** Which best represents the location of X on the number line?

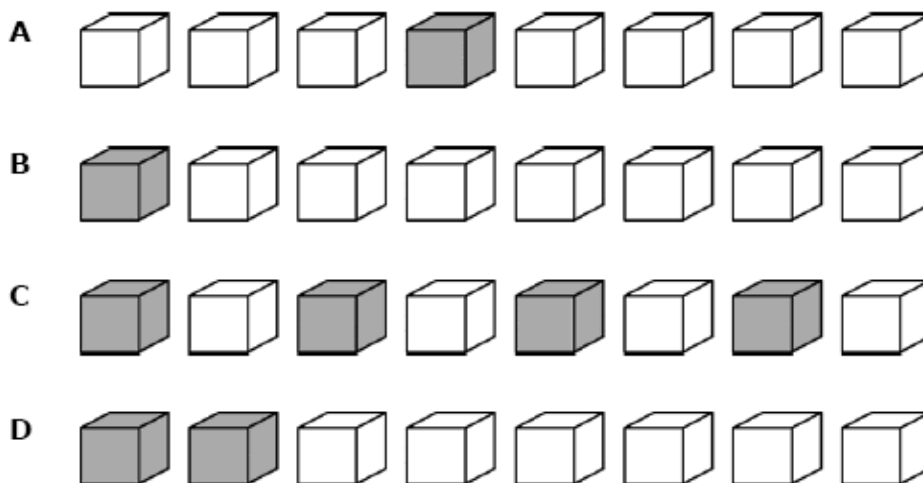


- A**  $\frac{1}{3}$
- B**  $\frac{1}{2}$
- C**  $1\frac{1}{3}$
- D**  $1\frac{1}{2}$

Answer: C

**N.MR.04.23** Understand the relationships among halves, fourths and eighths and among thirds, sixths and twelfths. [Ext]

**64** Which picture shows half of the boxes painted gray?



Answer: C

**N.MR.04.24** Know that fractions of the form  $\frac{m}{n}$ , where  $m$  is greater than  $n$ , are greater than 1 and are called improper fractions; locate improper fractions on the number line; express as mixed numbers. [Fut]

**74** What mixed number represents the shaded portion of the two models shown below?



- A**  $1\frac{2}{6}$
- B**  $1\frac{4}{6}$
- C**  $2\frac{4}{6}$
- D**  $2\frac{2}{4}$

Answer: B

**N.MR.04.25** Write improper fractions as mixed numbers, and understand that a mixed number represents the number of “wholes” and the part of a whole remaining, e.g.,

$$\frac{5}{4} = 1 + \frac{1}{4} = 1\frac{1}{4}. \text{ [Ext]}$$

(No questions associated with this extended core GLCE.)

**N.MR.04.26** Compare and order up to three fractions with denominators 2, 4, and 8, and 3, 6, and 12, including improper fractions and mixed numbers. **[Ext]**

65 Which fraction is *greater than*  $\frac{1}{2}$ ?

A  $\frac{1}{4}$

B  $\frac{2}{8}$

C  $\frac{3}{8}$

D  $\frac{3}{4}$

Answer: D

### Add and subtract fractions:

**N.MR.04.27** Add and subtract fractions less than 1 with denominators 12 or less and including 100, in cases where the denominators are equal or when one denominator is a

multiple of the other; e.g.,  $\frac{1}{12} + \frac{5}{12} = \frac{6}{12}$ ;  $\frac{2}{25} + \frac{7}{50} = \frac{11}{50}$ . **[Fut]**

75 What is the sum of  $\frac{1}{4} + \frac{3}{8}$ ?

A  $\frac{3}{32}$

B  $\frac{13}{48}$

C  $\frac{1}{3}$

D  $\frac{5}{8}$

Answer: D

**N.FL.04.28** Solve fraction problems involving sums and differences for fractions where one denominator is a multiple of the other (denominators 2 through 12, and 100). **[Fut]**

**76** Jim put  $\frac{1}{3}$  cup of flour in a bowl. Then he mixed in  $\frac{1}{6}$  cup more flour. Now how much flour is in the bowl?

**A**  $\frac{1}{18}$  cup

**B**  $\frac{2}{9}$  cups

**C**  $\frac{3}{6}$  cups

**D** 1 cup

Answer: C

**N.MR.04.29** Solve for the unknown in equations such as:

$\frac{1}{8} + x = \frac{5}{8}$  or  $\frac{3}{4} - y = \frac{1}{2}$ . **[Fut - NC]**

**77** Which value of  $g$  makes the number sentence true?

$$\frac{5}{8} - g = \frac{2}{8}$$

**A**  $\frac{1}{8}$

**B**  $\frac{2}{8}$

**C**  $\frac{3}{8}$

**D**  $\frac{7}{8}$

Answer: C

**Multiply fractions by whole numbers:**

**N.MR.04.30** Multiply fractions by whole numbers, using repeated addition and area or array models. **[Fut]**

**78** Which of the following is equivalent to  $\frac{2}{5}$ ?

- A** 0.25
- B**  $2 \times \frac{1}{5}$
- C** 2.5
- D** 4%

Answer: B

**Add and subtract decimal fractions:**

**N.MR.04.31** Use mathematical statements to represent problems that use addition and subtraction of decimals with up to two-digits; solve. **[Fut]**

**79** John needs \$2.50. He has \$0.75. How much more money does he need?

- A** \$ .75
- B** \$1.25
- C** \$1.50
- D** \$1.75

Answer: D

**N.FL.04.32** Add and subtract decimals up to two decimal places. **[Fut]**

**80** Quito had \$137.82 saved, and then he earned \$47.50 more. Which shows how much money Quito has now?

- |          |                |          |                |
|----------|----------------|----------|----------------|
| <b>A</b> | \$137.82       | <b>B</b> | \$137.82       |
|          | + <u>47.50</u> |          | + <u>47.50</u> |
|          | \$612.82       |          | \$185.32       |
| <b>C</b> | \$137.82       | <b>D</b> | \$137.82       |
|          | + <u>47.5</u>  |          | + <u>47.50</u> |
|          | \$142.57       |          | \$184.82       |

Answer: B

## Multiply and divide decimal fractions:

**N.FL.04.33** Multiply and divide decimals up to two decimal places by a one-digit whole number where the result is a terminating decimal, e.g.,  $0.42 \div 3 = 0.14$ , but not  $5 \div 3 = 1.6$ . **[Fut]**

**81** Anne has 8 apples. Laura has 2.5 times as many apples as Anne. How many apples does Laura have?

- A 10.5
- B 16
- C 20
- D 33

Answer: C

## Estimate:

**N.FL.04.34** Estimate the answers to calculations involving addition, subtraction, or multiplication. **[Ext]**

**66** Caylor bought 6 books in her favorite series. The total was \$18.12. Each book cost the same amount. How much did each book cost?

- A \$ 0.32
- B \$ 3.02
- C \$ 3.20
- D \$32.00

Answer: B

**N.FL.04.35** Know when approximation is appropriate and use it to check the reasonableness of answers; be familiar with common place-value errors in calculations. **[Core]**  
**(No questions associated with this core GLCE.)**

**N.FL.04.36** Make appropriate estimations and calculations fluently with whole numbers using mental math strategies. **[NASL]**

**Problem solving:**

**N.MR.04.37** Solve applied problems using the four basic arithmetic operations, for appropriate fractions, decimals, and whole numbers. **[Core - NC]**

- 1 If this pattern continues, what is the *greatest* number of apples you can buy for \$2.00?



Number of Apples	Cost
1	\$0.25
2	\$0.50
3	\$0.75
4	\$1.00
5	\$1.25

- A 2
- B 5
- C 6
- D 8

Answer: D

- 2 Jerry needs to drive 722 miles. Yesterday, he drove 175 miles. Today he drove 349 miles. What is the total number of miles Jerry still has to drive?

- A 198
- B 298
- C 524
- D 547

Answer: A

- 3 A freezer costs \$39 per month. What else is needed to determine the total cost of the freezer?

- A the size of the freezer
- B the price that other stores charge
- C the number of payments to be made
- D the portion of the buyer's monthly budget

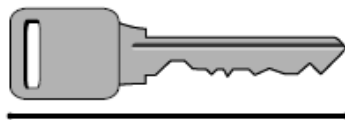
Answer: C

## Measurement

### Measure using common tools and appropriate units:

**M.UN.04.01** Measure using common tools and select appropriate units of measure. **[Core]**

**19** Use the inch ruler to measure the length of this key.



Which of the following is *closest* to the length of this key?

- A 1 inch
- B 2 inches
- C 4 inches
- D 5 inches

Answer: B

**24** Which tool can be used to measure the dimensions of a shoe box?

- A 100-gram balance
- B 12-inch ruler
- C digital thermometer
- D 8-ounce measuring cup

Answer: B

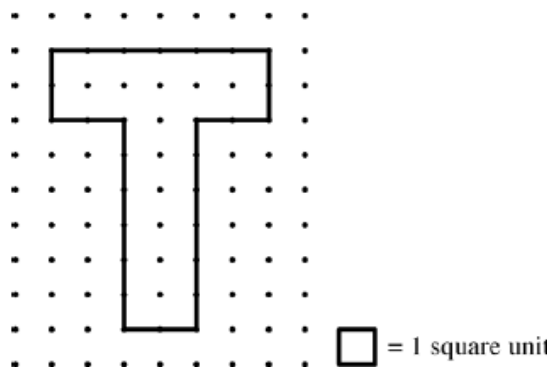
**30** The height of Celia's classroom door is  $6\frac{1}{2}$ . What are the *most likely* units for the height of the door?

- A feet
- B yards
- C inches
- D centimeters

Answer: A

**M.PS.04.02** Give answers to a reasonable degree of precision in the context of a given problem. **[Core]**

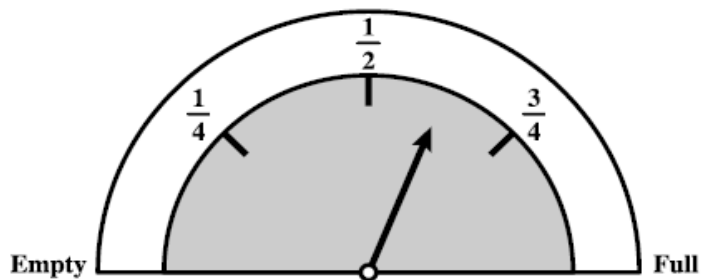
**38** What is the area of this block letter *T*?



- A 10 square units
- B 12 square units
- C 24 square units
- D 26 square units

Answer: C

**43** When the gasoline tank in Wiley's car is full, it holds 12 gallons of gasoline. Which is *closest* to the amount of gasoline in the tank?



- A 5 gallons
- B 6 gallons
- C 7 gallons
- D 10 gallons

Answer: C

**48** A science experiment requires 100 mL of water, plus or minus 0.5 mL. What is the *least* amount of water that can be used in the experiment?

- A 95 mL
- B 99.5 mL
- C 100.5 mL
- D 105 mL

Answer: B

**M.UN.04.03** Measure and compare integer temperatures in degrees. **[Core]**

**31** Which temperature is the *warmest*?

- A** 0°F
- B** 0°C
- C** 32°F
- D** 32°C

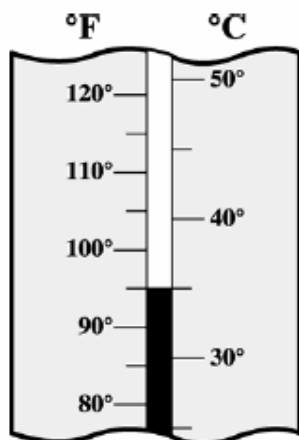
Answer: D

**36** Which temperature is the *coldest*?

- A** -3°F
- B** 0°F
- C** 5°F
- D** 32°F

Answer: A

**40** What temperature does the thermometer show?



- A** 35°C
- B** 77°F
- C** 95°C
- D** 122°F

Answer: A

**M.TE.04.04** Measure surface area of cubes and rectangular prisms by covering and counting area of the faces. **[NASL]**

### Convert measurement units:

**M.TE.04.05** Carry out the following conversions from one unit of measure to a larger or smaller unit of measure: meters to centimeters, kilograms to grams, liters to milliliters, hours to minutes, minutes to seconds, years to months, weeks to days, feet to inches, ounces to pounds (using numbers that involve only simple calculations.) **[Ext]**

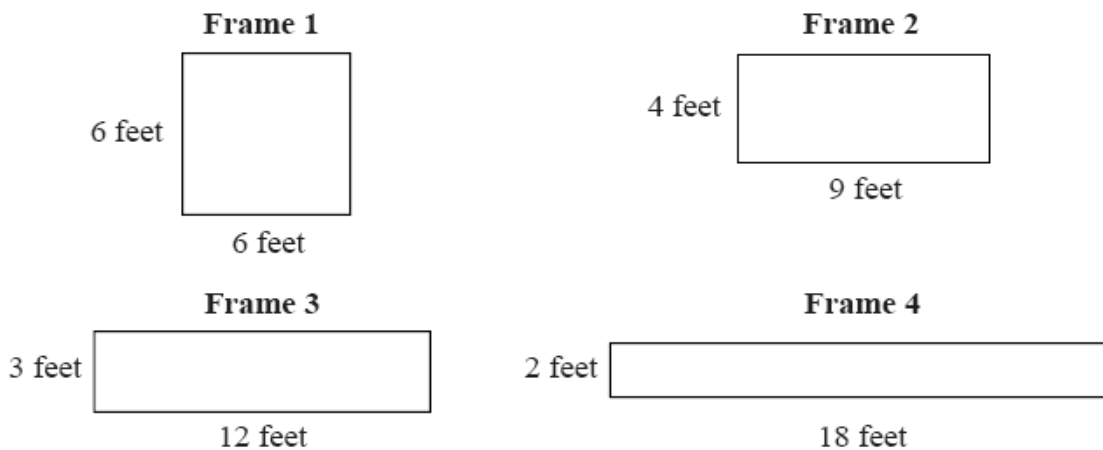
- 67** Max brushes his teeth three times a day. How many times does he brush his teeth in one year?
- A** 365
  - B** 730
  - C** 1,080
  - D** 1,095

Answer: D

### Use perimeter and area formulas:

**M.TE.04.06** Know and understand the formulas for perimeter and area of a square and a rectangle; calculate the perimeters and areas of these shapes and combinations of these shapes using the formulas. **[Core]**

- 25** The following pictures show four possible frames for a sandbox with an area of 36 square feet.

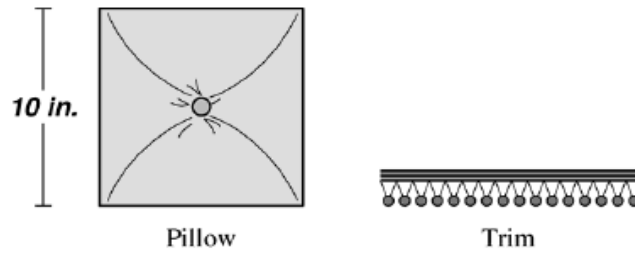


Which frame uses the *least* amount of wood?

- A** Frame 1
- B** Frame 2
- C** Frame 3
- D** Frame 4

Answer: A

- 35 This pillow measures 10 inches on each side. What is the least amount of trim needed to put trim around all four sides of the pillow?



- A 10 inches
- B 20 inches
- C 40 inches
- D 100 inches

Answer: C

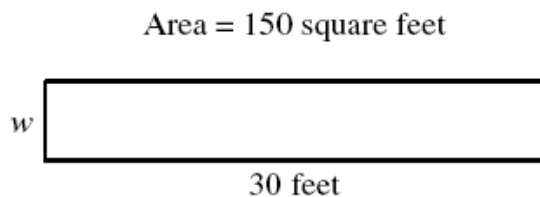
- 37 Which is the *most* reasonable description of a desirable room temperature for a plant?

- A between 75°F and 76°F
- B between 32°F and 100°F
- C between 0.0°F and 100.9°F
- D between 55°F and 58°F

Answer: A

**M.TE.04.07** Find one dimension of a rectangle given the other dimension and its perimeter or area.  
**[Core]**

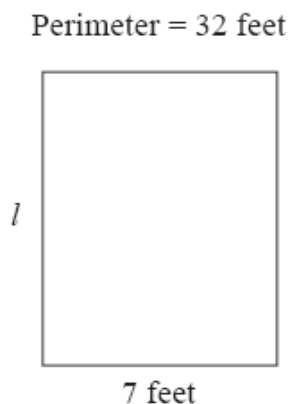
- 41** The rectangle below has a length of 30 feet and an area of 150 square feet. What is the width of the rectangle?



- A** 5 feet
- B** 45 feet
- C** 50 feet
- D** 120 feet

Answer: A

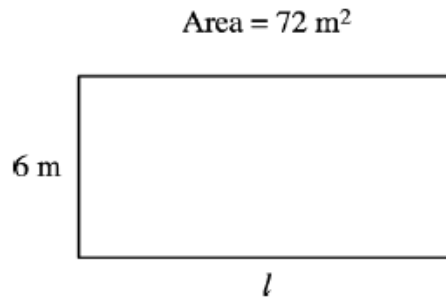
- 47** The rectangle below has a width of 7 feet and a perimeter of 32 feet. What is the length of the rectangle shown here?



- A** 9 feet
- B** 18 feet
- C** 25 feet
- D** 39 feet

Answer: A

- 49 The rectangle below has a width of 6 meters and an area of 72 square meters. What is the length of the rectangle?



- A 2 meters
- B 12 meters
- C 30 meters
- D 432 meters

Answer: B

**M.TE.04.08** Find the side of a square given its perimeter or area. [Ext]  
(No questions associated with this extended core GLCE.)

**M.PS.04.09** Solve contextual problems about perimeter and area of squares and rectangles in compound shapes. [Fut]

- 82 Which phrase *best* describes the difference between Figure A and Figure B?



Figure A

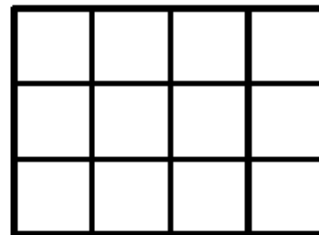


Figure B

- A the perimeter
- B the area
- C the number of squares
- D the volume

Answer: A

## Understand right angles:

**M.TE.04.10** Identify right angles and compare angles to right angles. **[Ext]**

**68** Which type of angle has a measure that is smaller than a right angle?

- A** acute
- B** obtuse
- C** straight
- D** congruent

Answer: A

## Problem solving:

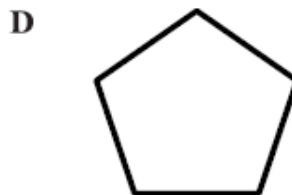
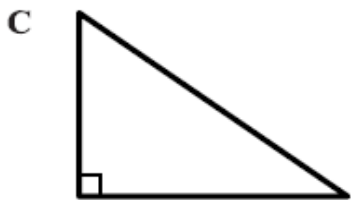
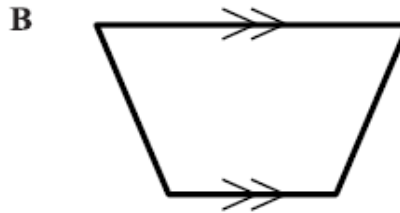
**M.PS.04.11** Solve contextual problems about surface area. **[Fut]**  
(No questions associated with this future GLCE.)

## Geometry

### Understand perpendicular, parallel, and intersecting lines:

**G.GS.04.01** Identify and draw perpendicular, parallel, and intersecting lines using a ruler and a tool or object with a square ( $90^\circ$ ) corner. **[Ext]**

**69** Which figure below has two sets of parallel sides?



Answer: A

**Identify basic geometric shapes and their components, and solve problems:**

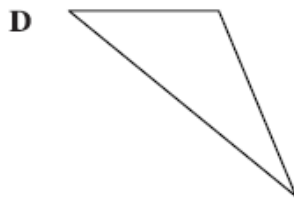
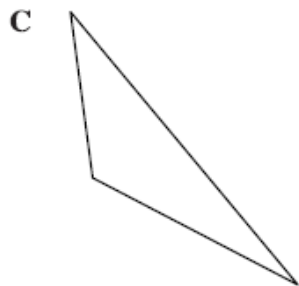
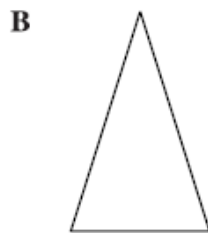
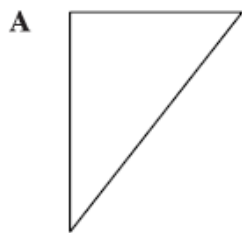
**G.GS.04.02** Identify basic geometric shapes, including isosceles, equilateral and right triangles, and use their properties to solve problems. **[Core]**

**46** Which of the following is true of equilateral triangles?

- A** One of the angles measures 90 degrees.
- B** All of the angles measure 60 degrees.
- C** Two of the angles measure less than 60 degrees.
- D** Two of the angles measure greater than 60 degrees.

Answer: B

**50** Which figure below appears to be a right triangle?



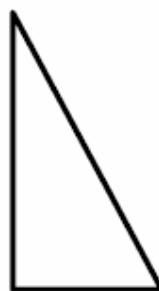
Answer: A

55 Which triangle below appears to be an isosceles triangle?

A



B



C



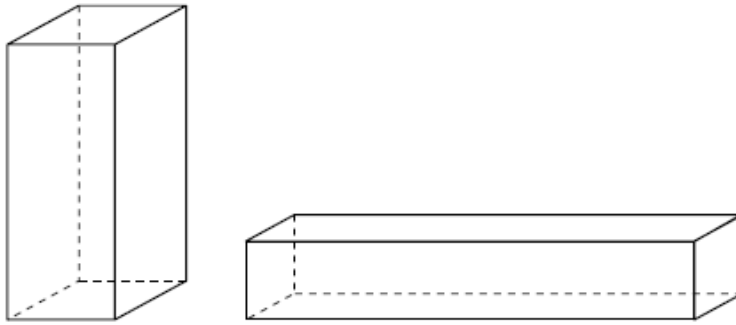
D



Answer: C

**G.SR.04.03** Identify and count the faces, edges, and vertices of basic three-dimensional geometric solids including cubes, rectangular prisms, and pyramids; describe the shape of their faces. **[Core]**

**27** Which will *always* be true about any two rectangular prisms such as these?



- A** They have the same volume.
- B** They have the same surface area.
- C** Their edges are all the same length.
- D** They have the same number of faces.

Answer: D

**42** Which of the following solids has 2 circular, parallel bases?

- A** cylinder
- B** prism
- C** pyramid
- D** sphere

Answer: A

**44** Which figure does **NOT** have at least one base?

- A** cone
- B** cube
- C** sphere
- D** cylinder

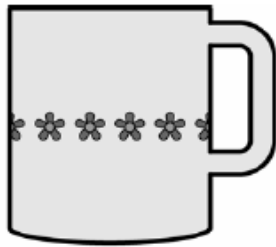
Answer: C

**Recognize symmetry and transformations:**

**G.TR.04.04** Recognize plane figures that have line symmetry. **[Ext]**

**70** Which drawing below has exactly one line of symmetry?

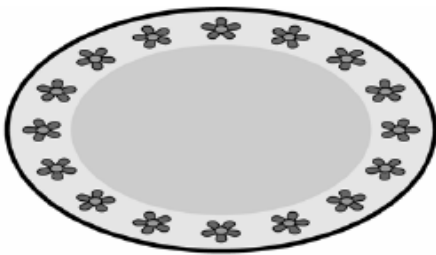
**A**



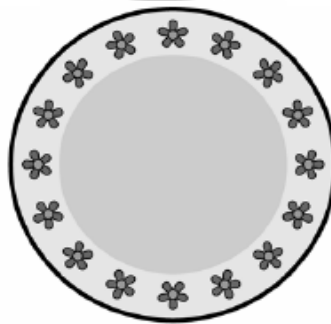
**B**



**C**



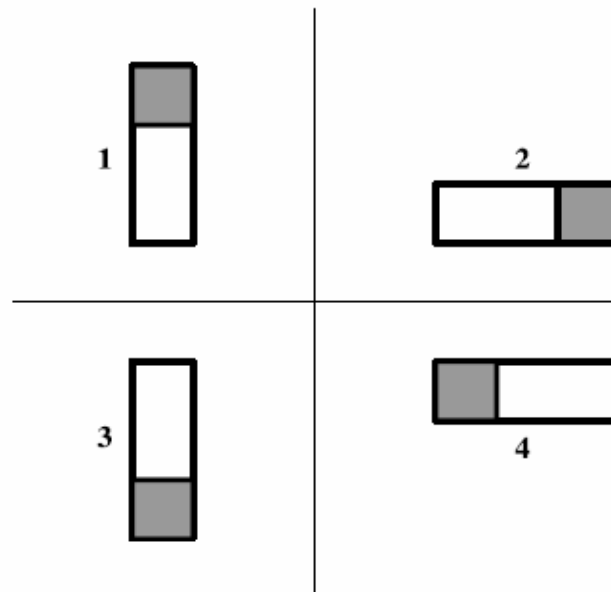
**D**



Answer: B

**G.TR.04.05** Recognize rigid motion transformations (flips, slides, turns) of a two-dimensional object.  
[Core]

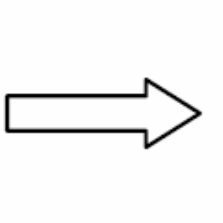
**22** Which pair of figures shows only a reflection?



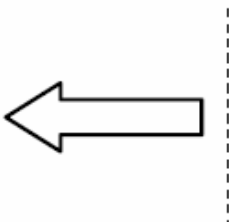
- A** 1 and 2
- B** 1 and 3
- C** 2 and 4
- D** 3 and 4

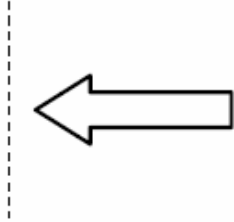
Answer: B

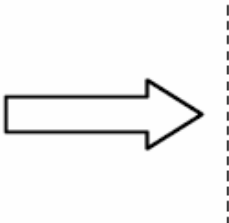
29 Look at the arrow and the dotted line segment.

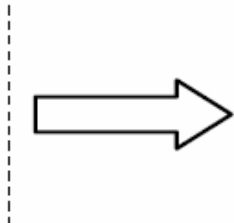


Which of the following shows the arrow and the dotted line segment after the arrow is flipped over the dotted line segment?

**A** 

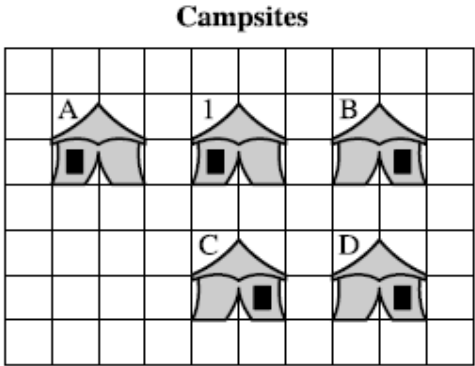
**B** 

**C** 

**D** 

Answer: B

33 Which campsite is only a translation from Campsite 1?



- A** Campsite A
- B** Campsite B
- C** Campsite C
- D** Campsite D

Answer: A

## Data and Probability

### Represent and solve problems for given data:

**D.RE.04.01** Construct tables and bar graphs from given data. [Ext]  
(No questions associated with this extended core GLCE.)

**D.RE.04.02** Order a given set of data, find the median, and specify the range of values.  
[Core]

53 The table shows the number of pets owned by each of 7 students.

**Fourth Grade Pets**

Name	Number of Pets
Tim	1 dog
Jason	2 cats
Ed	3 birds
Trish	3 dogs
Laura	2 dogs
Raul	1 hamster
Gigi	1 cat

What is the median number of pets owned?

- A** 2
- B** 3
- C** 7
- D** 13

Answer: A

56 The table shows the number of students in five fifth-grade classes.

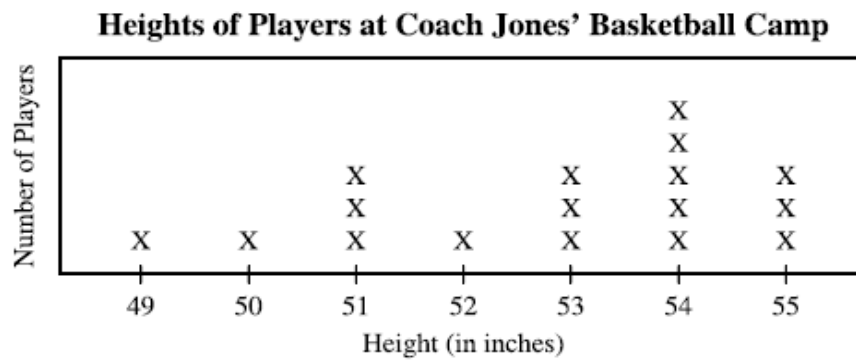
Teacher's Name	Number of Students
Mr. Carter	24
Mr. Rojas	27
Ms. Lucas	25
Ms. Manor	23
Ms. Paris	23

Which class has exactly the median number of students?

- A Mr. Carter's class
- B Mr. Rojas's class
- C Ms. Lucas's class
- D Ms. Paris's class

Answer: A

57 This chart shows the heights of the players at a basketball camp.



What was the median height of the players?

- A 52 inches
- B 53 inches
- C 54 inches
- D 55 inches

Answer: B

**D.RE.04.03** Solve problems using data presented in tables and bar graphs, e.g., compare data represented in two bar graphs; read bar graphs showing two data sets. **[Core]**

23 This chart shows the lace lengths needed for shoes with different numbers of eyelets.

**SHOELACE CHART**

Number of Eyelets	Lace Length
6 pairs of eyelets	45 inches
7 pairs of eyelets	54 inches
8 pairs of eyelets	63 inches
9 pairs of eyelets	?

What number goes in the empty space on the chart?

- A 64 inches
- B 72 inches
- C 81 inches
- D 79 inches

Answer: B

39 Karen has four suitcases. Each suitcase has a different combination lock. She set the combination for suitcase #1 to the year she was born. Then she followed a rule to set the combinations for suitcase #2 and suitcase #3.

Suitcase	#1	#2	#3	#4
Combination	1995	1950	1905	?

Which rule does this pattern follow?

- A Add 55 to the previous combination.
- B Add 45 to the previous combination 3.
- C Subtract 55 from the previous combination.
- D Subtract 45 from the previous combination.

Answer: D

- 45 The chart shows the relationship between the time on the clock and the number of shirts Gary had finished ironing.

**GARY'S IRONING**

<b>Time</b>	<b>Total Number of Shirts Ironed</b>
8:15	0
8:31	2
8:47	4
9:03	6

According to the data in the chart, how many minutes did it take Gary to iron each shirt?

- A** 2 minutes
- B** 6 minutes
- C** 8 minutes
- D** 48 minutes

Answer: C