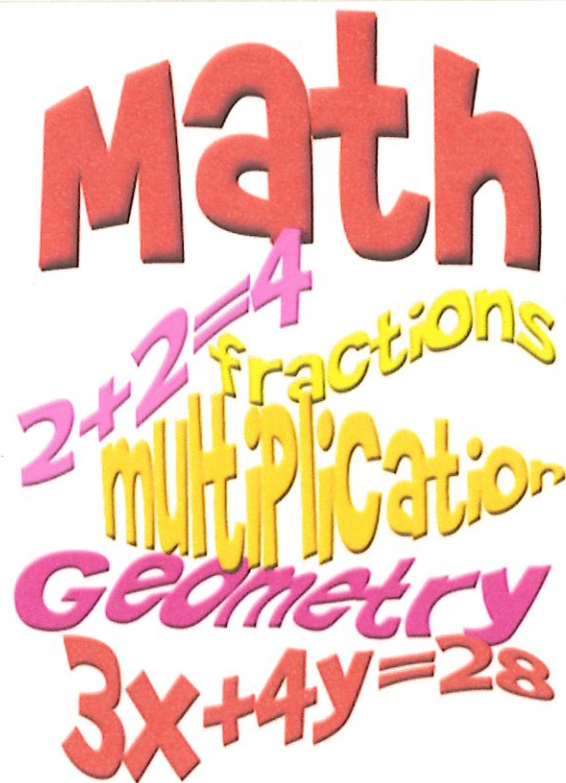


Name: _____

Date: _____

2022 Summer Math packet for all 7th Grade students going to 8th Grade



All work must be attached to packet in order to receive full credit. The packet will be collected and graded first thing next school year. The packet contains problems similar to those done throughout the school year. Have a great summer! - Dr. Unzueta and Mrs. Lam

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7th to 8th Summer Packet

Indicate the answer choice that best completes the statement or answers the question.

Write a numerical expression for each verbal phrase.

___ 1) the difference of twenty-one and seven

A) $7 \div 21$

B) $7 - 21$

C) $21 - 7$

D) $21 \div 7$

___ 2) the quotient of eight and two

A) $8 \div 2$

B) 8×2

C) $2 - 8$

D) $2 \div 8$

___ 3) the product of fourteen and seven

A) 14×7

B) $14 - 7$

C) $14 + 7$

D) $14 \div 7$

___ 4) the total number of coins Kyle has if he has 12 quarters and 20 dimes

A) 12×20

B) $20 - 12$

C) $12 + 20$

D) $20 \div 12$

Find the value of each expression.

___ 5) $3[(8 + 4) \div 2]$

A) 26

B) 18

C) 30

D) 9

___ 6) $32 \div 4 \times 2$

A) 4

B) 64

C) 40

D) 16

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Translate each phrase into an algebraic expression.

___ 7) twelve more than a number times three

- A) $3x - 12$
- B) $3 + x + 12$
- C) $x + 12$
- D) $3x + 12$

Evaluate each expression if $x = 7$, $y = 3$, and $z = 12$.

___ 8) $x + (21 - 4y)$

- A) 40
- B) 16
- C) 27
- D) 14

___ 9) $x + 11 - z$

- A) 16
- B) 15
- C) 6
- D) 30

Simplify each expression.

___ 10) $9 + (4 + a)$

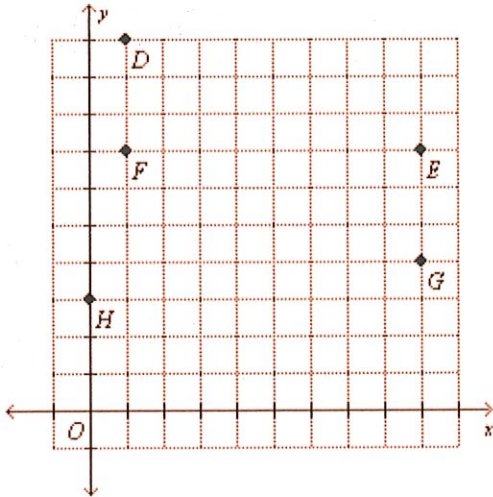
- A) $a + 36$
- B) $a + 5$
- C) $4a + 9$
- D) $a + 13$

___ 11) $(5x)20$

- A) $4x$
- B) $15x$
- C) $25x$
- D) $100x$

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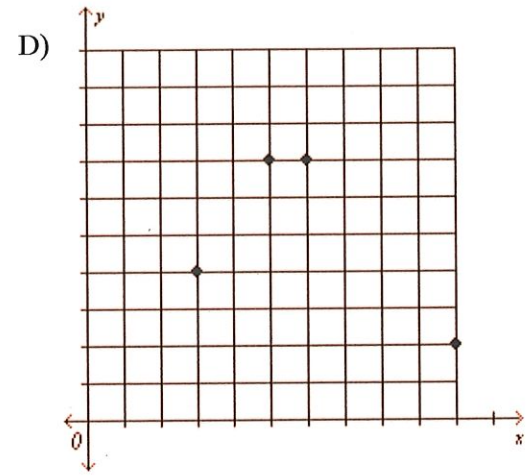
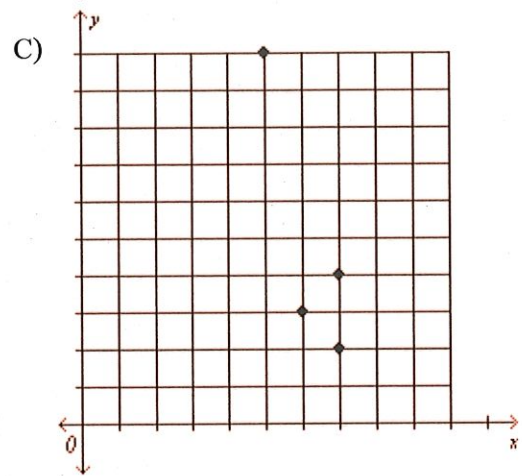
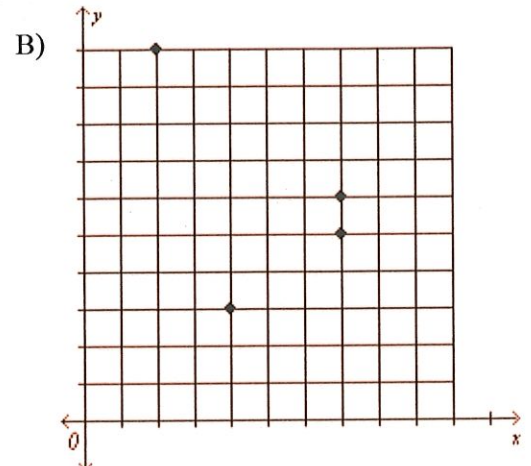
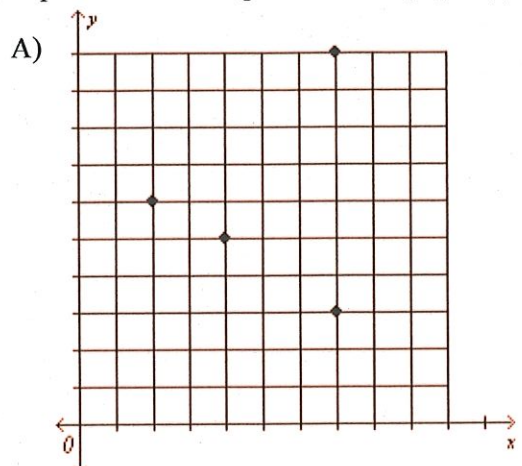
___ 12) Refer to the coordinate system shown below. Write the ordered pair that names point *D*.



- A) (1, 9)
- B) (10, 2)
- C) (10, 1)
- D) (1, 10)

7th to 8th Summer Packet

___ 13) Express the following relation as a graph: $\{(7, 5), (2, 10), (7, 6), (4, 3)\}$.



___ 14) Replace each \bigcirc with $<$, $>$, or $=$ to make a true sentence.

- 17 \bigcirc -7
 A) $<$
 B) $>$
 C) $=$

___ 15) Evaluate the expression below.

- $11 - ||3| - 10|$
 A) 4 B) -2
 C) 24 D) 18

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Add or subtract.

___ 16) $-9 + (-6) + 14$

- A) -29 B) -1
C) 11 D) -15

___ 17) $-49 + 9 + (-21)$

- A) -61 B) -37
C) -19 D) -79

Find each difference.

___ 18) $-65 - (-24)$

- A) -41 B) -89
C) 41 D) 89

Determine the value of each expression.

___ 19) $-5(-7)(-10)$

- A) -350 B) 350
C) -35 D) 35

Simplify each expression.

___ 20) $6a(-6)$

- A) -36 B) -36a
C) 36a D) 36

Find each quotient.

___ 21) $171 \div 19$

- A) -9 B) 3249
C) 9 D) 152

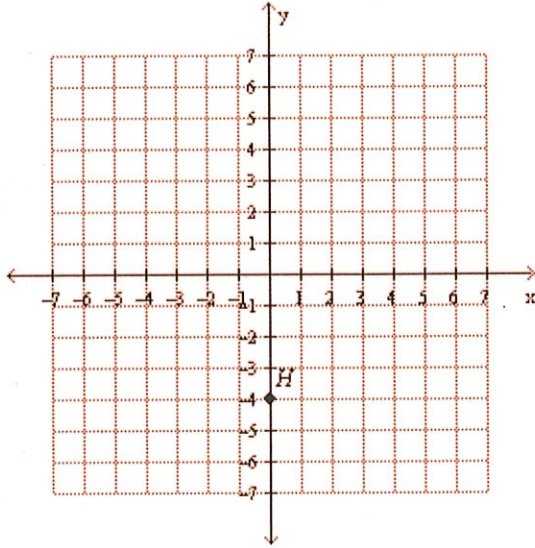
___ 22) The number of books Joy read each month for the first 6 months of the year were 3, 5, 4, 5, 2, and 5. Find the average number of books she read per month.

- A) 24 books B) 5 books
C) 4 books D) 18 books

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Name the ordered pair for the point in the graph. Then identify the quadrant in which the point lies.

___ 23)



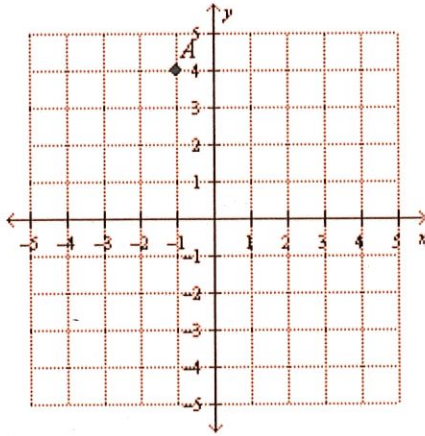
- A) $H(0, -4)$; x -axis
- B) $H(-4, 0)$; x -axis
- C) $H(0, -4)$; y -axis
- D) $H(-4, 0)$; y -axis

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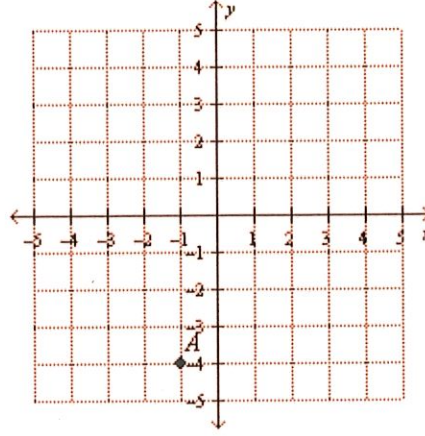
Graph each point on a coordinate system.

___ 24) $A(-1, 4)$

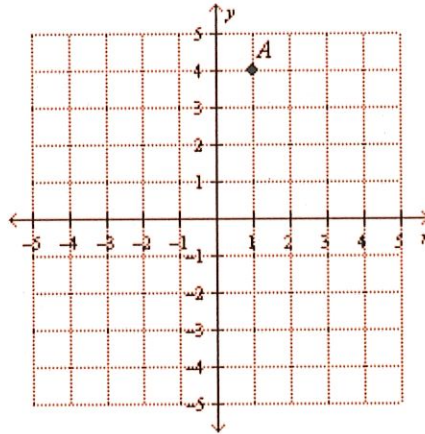
A)



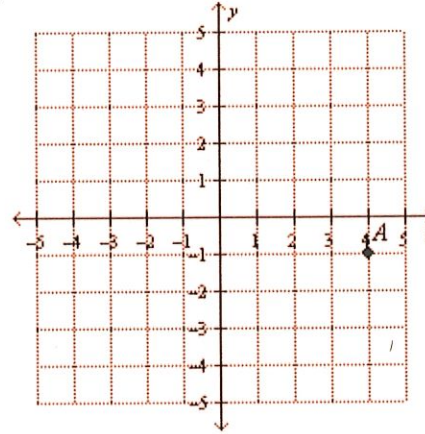
B)



C)



D)



Replace the ___ with the symbol that makes a true sentence.

___ 25) $\frac{13}{15}$ ___ 0.5

A) + B) =

C) > D) <

Write the decimal as a fraction or mixed number in simplest form.

___ 26) $-0.\bar{4}$

A) $-\frac{44}{1000}$ B) $-\frac{44}{100}$

C) $-\frac{8}{18}$ D) $-\frac{4}{9}$

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Find the product. Write the product in simplest form.

— 27) $-1\frac{1}{6} \times (-2\frac{1}{2})$

A) $\frac{7}{15}$ B) $2\frac{11}{12}$

C) $\frac{12}{35}$ D) $2\frac{1}{7}$

— 28) $-\frac{1}{3} \times \frac{1}{9}$

A) -3 B) $\frac{1}{3}$

C) $-\frac{2}{15}$ D) $-\frac{1}{27}$

— 29) Evaluate $\frac{1}{2}ab$ if $a = \frac{4}{9}$ and $b = -\frac{7}{8}$. Write in simplest form.

A) $\frac{7}{36}$ B) $-\frac{7}{18}$

C) $-\frac{16}{63}$ D) $-\frac{7}{36}$

Find the quotient. Write the answer in simplest form.

— 30) $\frac{1}{2} \div (-\frac{7}{17})$

A) $1\frac{3}{14}$ B) $-\frac{31}{34}$

C) $\frac{14}{17}$ D) $\frac{7}{34}$

— 31) $2\frac{2}{7} \div 1\frac{3}{4}$

A) $4\frac{1}{28}$ B) 4

C) $1\frac{15}{49}$ D) $\frac{49}{64}$

7th to 8th Summer Packet

Find the sum or difference. Write the answer in simplest form.

— 32) $\frac{3}{10} - \frac{7}{10}$

- A) 1 B) $\frac{2}{5}$
C) -1 D) $-\frac{2}{5}$

Add or subtract. Express in simplest form.

— 33) $-3\frac{4}{7} + (-4\frac{2}{3})$

- A) $-8\frac{1}{21}$ B) $-3\frac{9}{10}$
C) $-1\frac{6}{7}$ D) $-8\frac{5}{21}$

— 34) $3\frac{5}{9} - (-1\frac{10}{27})$

- A) $1\frac{11}{12}$ B) $2\frac{5}{27}$
C) $2\frac{5}{9}$ D) $4\frac{25}{27}$

Write the expression using exponents.

— 35) $5 \cdot 5 \cdot 5 \cdot 5 \cdot 5 \cdot 5$

- A) 5^5 B) $5 \cdot 6$
C) 5^6 D) 6^5

— 36) $(-5)(-5)(-5)(-5)(-5)(8)(8)(8)(8)$

- A) $(-5 + 5) \cdot (8 + 4)$ B) $(-5 \times 5) \cdot (8 \times 4)$
C) $(5)^{-5} \cdot (4)^8$ D) $(-5)^5 \cdot (8)^4$

— 37) Evaluate $11^7 \cdot 11^4$.

- A) 1^{11} B) 11^{11}
C) 11^{28} D) 11^3

— 38) Evaluate $x^3 - y^2$ if $x = 9$ and $y = 4$.

- A) 19 B) 725
C) 125 D) 713

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- ___ 39) Evaluate $4(2b + 1)^3$ if $b = 2$.
 A) 68 B) 500
 C) 60 D) 260

Write the fraction as an expression using a negative exponent other than -1 .

- ___ 40) $\frac{1}{7^2}$
 A) 0.7^{-2} B) -7^{-2}
 C) $\left(\frac{1}{7}\right)^{-2}$ D) 7^{-2}

Find the product or quotient. Express using positive exponents.

- ___ 41) $8^7 \cdot 8^6$
 A) 8^{42} B) 64^{13}
 C) 8^{13} D) 64^1

- ___ 42) $\frac{8^8}{8^4}$
 A) 1 B) 8^4
 C) 64^4 D) 8^{12}

Express each ratio as a unit rate. Round to the nearest tenth, if necessary.

- ___ 43) 365 miles for 15.1 gallons
 A) 22.4 miles per gallon B) 24.2 miles per gallon
 C) 48.4 miles per 2 gallons D) 48.4 miles per gallon

- ___ 44) Simplify $\frac{\frac{2}{3}}{\frac{4}{4}}$.
 A) $2\frac{2}{3}$ B) $2\frac{1}{3}$
 C) $1\frac{1}{2}$ D) $\frac{3}{8}$

- ___ 45) A market charges \$1.60 for 1 dozen eggs. How many dozen eggs can you buy with \$6.40?
 A) 5 dozen eggs B) 9 dozen eggs
 C) 3 dozen eggs D) 4 dozen eggs

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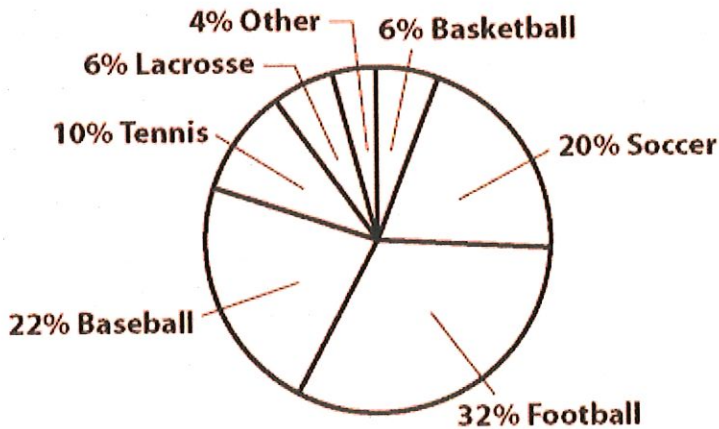
___ 46) Simplify $\frac{\frac{1}{2}}{\frac{1}{6}}$.

- A) $\frac{1}{12}$ B) $\frac{1}{3}$
 C) 3 D) 12

___ 47) Kai picked $13\frac{1}{2}$ pounds of strawberries. He divided them evenly among 9 containers. How many pounds of strawberries did Kai place in each container?

- A) $\frac{2}{3}$ lb B) $1\frac{4}{9}$ lb
 C) $1\frac{1}{2}$ lb D) $121\frac{1}{2}$ lb

___ 48) Out of 284 high school students surveyed, how many favored football?



- A) 91 B) 105
 C) 888 D) 77

Use the percent proportion to solve each problem. Round to the nearest tenth.

___ 49) What is 78% of 40?

- A) 195 B) 51.3
 C) 3.12 D) 31.2

___ 50) 37 is what percent of 58?

- A) 63.8% B) 37%
 C) 156.8% D) 62.8%

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Solve each problem using the percent equation.

___ 51) 26.6 is what percent of 53.2?

- A) 200% B) 50%
C) 0.5% D) 5%

Find the percent of increase. Round to the nearest tenth, if necessary.

___ 52) from 17 m to 42 m

- A) 40.5% increase B) 147.1% increase
C) 68% increase D) 59.5% increase

Solve each equation.

___ 53) $11 = 3 + 4x$

- A) 8
B) $\frac{7}{2}$
C) 2
D) 32

___ 54) $\frac{3}{8}a = \frac{4}{9}$

- A) $\frac{1}{6}$
B) $\frac{27}{32}$
C) $\frac{5}{72}$
D) $1\frac{5}{27}$

___ 55) $\frac{1}{4}y + 15 = 4$

- A) 76
B) $-\frac{11}{4}$
C) -44
D) 1

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Translate each sentence into an equation. Then find each number.

___ 56) The difference of a number divided by five and twelve is -1.

A) $\frac{y}{5} - 12 = -1; y = 55$

B) $12 - \frac{y}{5} = -1; y = \frac{13}{5}$

C) $\frac{y}{5} + 12 = -1; y = -\frac{13}{5}$

D) $\frac{y}{5} - 12 = -1; y = \frac{13}{5}$

Solve each equation.

___ 57) $60 = -6(x - 5)$

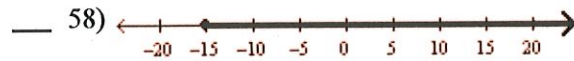
A) -15

B) 50

C) -5

D) -1

Write the inequality for the graph.



A) $q \leq -15$

B) $q < -15$

C) $q > -15$

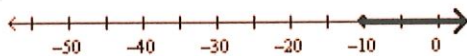
D) $q \geq -15$

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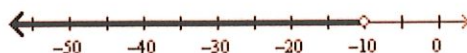
Solve the inequality. Graph the solution on a number line.

59) $\frac{m}{-2} < 5$

A) $m > -10$



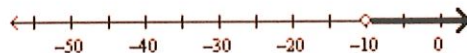
B) $m < -10$



C) $m < 3$



D) $m > -10$



Solve the equation.

60) $6(5x + 6) = 24(x + 3)$

A) -4

B) -2

C) 9

D) 6