

Cold Spring Harbor High School

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June 2017

Dear Student,

Congratulations on your placement into Math 8 Accelerated. I am proud of you and excited to teach you Algebra next year. As you know, the students who take 8 Accelerated cover both the Math 8 curriculum as well as the New York State Algebra Common Core curriculum in one year.

To help with the transition from 7th grade math to Algebra, I have created this packet of material for you to work on over the summer. It is not required and will not be graded.

The math in this packet represents pre-requisite skills that you should have mastered before September. I suggest that you complete these sheets on a separate sheet of paper. Calculators can be used.

Have a great summer, work hard to complete your packet. See you in September.

A handwritten signature in cursive script that reads "Christine Watt".

Christine Watt
Mathematics Teacher

2F: Vocabulary Review

For use with Chapter Review

Study Skill To succeed in mathematics, you need to understand the language and the words. Learn the new math terms one at a time by drawing a diagram or by writing a sentence to make the meaning clear.

Match each word or phrase in the left column with the best example in the right column. Some words or phrases may have more than one example, but only one example is the best match.

Word or Phrase**Example or Definition**

1. Addition Property of Equality _____

A. $w + 0 = w$

2. Additive Identity _____

B. $n \cdot 1 = n$

3. Associative Property _____

C. $(pq)r = p(qr)$

4. Commutative Property _____

D. If $a = c$, then $a + b = c + b$.

5. Multiplicative Identity _____

E. $x \cdot y = y \cdot x$

Word or Phrase**Example or Definition**

6. constant _____

A. $6 + 22 = 28$

7. open sentence _____

B. $13y$

8. equation _____

C. $17 + b = 47$

9. solution _____

D. 75

10. term _____

E. When $x + 37 = 62$, $x = 25$.

1D: Visual Vocabulary Practice

For use after Lesson 1-10

Study Skill The Glossary contains the key vocabulary for this course.

Concept List

opposites

quadrants

x-axis

ordered pair

variable

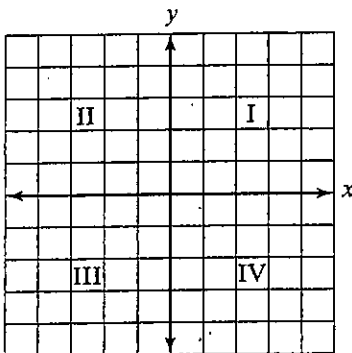
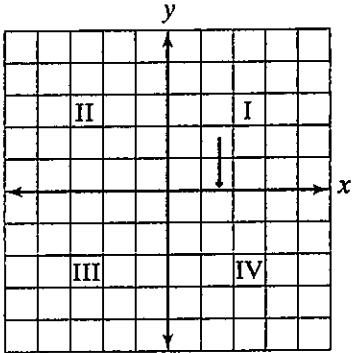
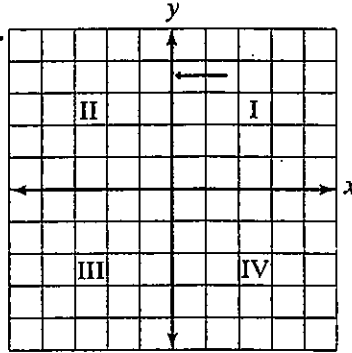
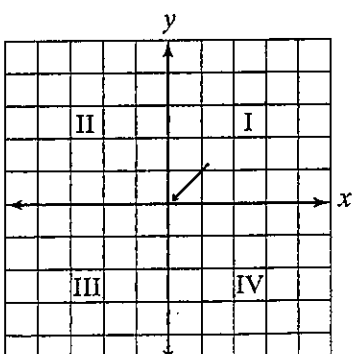
y-axis

origin

algebraic expression

y-coordinate

Write the concept that best describes each exercise. Choose from the concept list above.

1. The letter "c" in $24c + 8$ _____	2. $10d - 3 + a$ _____	3. -9 and 9 _____
4.  _____	5.  _____	6.  _____
7. $(2, -3)$ _____	8.  _____	9. The number 8 in $(5, 8)$ _____

2D: Visual Vocabulary Practice

For use after Lesson 2-5

Study Skill Mathematics builds on itself so build a strong foundation.

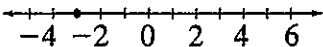
Concept List

coefficient
expression
open sentence

constant
graph
solution of equation

equation
inverse operations
terms

Write the concept that best describes each exercise. Choose from the concept list shown above.

1. $4x$ and 9 in $4x + 9$ _____	2.  _____	3. 9 in $2n - 6m + 9$ _____
4. The 3 and 6 in $3a + 6b - 10$ _____	5. The number 3 if $y + 19 = 22$ _____	6. $4c - 6 = c$ _____
7. $5(4 - 2) = 10$ _____	8. addition and subtraction _____	9. $-8x + 6xy + 7y$ _____

4F: Vocabulary Review

For use with Chapter Review

Study Skill Many words in English have more than one meaning. You can often figure out which meaning to use by looking at the sentence that contains the word. To help you decide what a word means, consider the surroundings, or context, in which you see the word.

Match each word or phrase in the left column with the best example in the right column. Some words or phrases may have more than one example, but only one example is the best match.

Word or Phrase	Example
1. exponent _____	A. the 5 in 5^2
2. base _____	B. 4.06×10^3
3. factors _____	C. $\frac{3}{4} = \frac{6}{8}$
4. scientific notation _____	D. both the 3 and the 5 in $3 \cdot 5$
5. standard notation _____	E. 4,060
6. prime factorization _____	F. the 2 in 5^2
7. equivalent fractions _____	G. $60 = 2 \cdot 2 \cdot 3 \cdot 5$

Word or Phrase	Example
8. formula _____	A. the 4 in $4x$
9. dividend _____	B. the $5x$ in $5x - 2$
10. like terms _____	C. 10 in $10 \div 5 = 2$
11. coefficient _____	D. $3x$ and $7x$
12. term _____	E. 11
13. prime number _____	F. $P = 2l + 2w$
14. rational number _____	G. $\frac{2}{3}$

8D: Visual Vocabulary Practice

For use after Lesson 8-

Study Skill When learning about a new concept, try to draw a picture to illustrate it.

Concept List

constant of variation

relation

slope

linear equation

direct variation

slope-intercept form

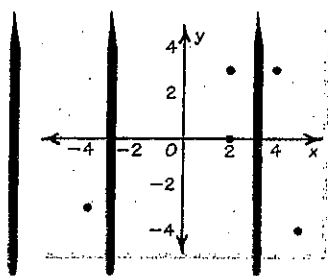
linear inequality

vertical-line test

system of linear equations

Write the concept that best describes each exercise. Choose from the concept list shown above.

1. $y = 2x + 1$



2. $\frac{\text{rise}}{\text{run}}$

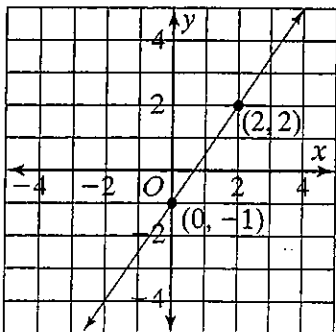
3. $y = mx + b$

4. $(0, 1), (1, 2), (2, 3)$

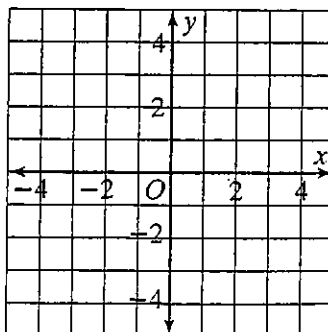
5. k in $y = kx$

6. $y = kx$

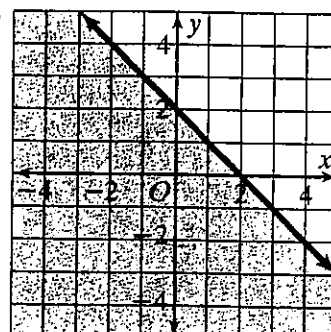
7.



8. $y = x, y = 2x + 3$



9.



Practice 1-1**Variables and Expressions**

Write an expression for each quantity.

1. the value in cents of 5 quarters _____
2. the value in cents of q quarters _____
3. the number of months in 7 years _____
4. the number of months in y years _____
5. the number of gallons in 21 quarts _____
6. the number of gallons in q quarts _____

Write an algebraic expression for each word phrase.

- | | |
|--|--|
| 7. 9 less than k
_____ | 8. m divided by 6
_____ |
| 9. twice x
_____ | 10. 4 more than twice x
_____ |
| 11. the sum of eighteen and b
_____ | 12. three times the quantity 2 plus a
_____ |

Tell whether each expression is a numerical expression or an algebraic expression. For an algebraic expression, name the variable.

- | | |
|----------------------------|---------------------------|
| 13. $4d$ _____ | 14. $74 + 8$ _____ |
| 15. $\frac{4(9)}{6}$ _____ | 16. $14 - p$ _____ |
| 17. $5k - 9$ _____ | 18. $3 + 3 + 3 + 3$ _____ |
| 19. $19 + 3(12)$ _____ | 20. $25 - 9 + x$ _____ |

Write an expression for each quantity.

21. the number of hours in 5 days

22. the number of weeks in d days

Practice 4-2**Exponents****Evaluate each expression.**

1. m^4 , for $m = 5$ _____
2. $(5a)^3$, for $a = -1$ _____
3. $-(2p)^2$, for $p = 7$ _____
4. $-n^6$, for $n = 2$ _____
5. b^6 , for $b = -1$ _____
6. $(e - 2)^3$, for $e = 11$ _____
7. $(6 + h^2)^2$, for $h = 3$ _____
8. $x^2 + 3x - 7$, for $x = -4$ _____
9. $y^3 - 2y^2 + 3y - 4$, for $y = 5$ _____

Write using exponents.

10. $3 \cdot 3 \cdot 3 \cdot 3$ _____
11. $k \cdot k \cdot k \cdot k \cdot k$ _____
12. $(-9)(-9)(-9)m \cdot m \cdot m$ _____
13. $g \cdot g \cdot g \cdot g \cdot h$ _____
14. $7 \cdot a \cdot a \cdot b \cdot b \cdot b$ _____
15. $-8 \cdot m \cdot n \cdot n \cdot 2 \cdot m \cdot m$ _____
16. $d \cdot (-3) \cdot e \cdot e \cdot d \cdot (-3) \cdot e$ _____

Simplify.

17. $(-2)^3$ and -2^3 _____
18. 0^{12} _____
19. 2^8 and 4^4 _____
20. $-5^2 + 4 \cdot 2^3$ _____
21. $3(8 - 6)^2$ _____
22. $-6^2 + 2 \cdot 3^2$ _____
23. $(-2)(-5)^2(3)$ _____
24. $24 + (11 - 3)^2 \div 4$ _____
25. $(17 - 3)^2 \div (4^2 - 3^2)$ _____
26. $(5 + 10)^2 \div 5^2$ _____
27. $4^3 \div (2^5 - 4^2)$ _____
28. $(-1)^5 \cdot (2^4 - 13)^2$ _____

Practice 4-7**Exponents and Multiplication****Complete each equation.**

1. $9^3 \cdot 9 \text{ --- } = 9^7$

2. $6^8 \cdot 6 \text{ --- } = 6^{17}$

3. $n \text{ --- } \cdot n^5 = n^{15}$

4. $(a \text{ --- })^8 = a^{24}$

5. $(c^4) \text{ --- } = c^{12}$

6. $r \text{ --- } \cdot r^{12} = r^{20}$

Simplify each expression.

7. $(z^3)^5$ _____

8. $-(m^4)^3$ _____

9. $(-3^2)^3$ _____

10. $(x^3)(x^4)$ _____

11. $y^4 \cdot y^5$ _____

12. $(-y^5)(y^2)$ _____

13. $(3y^2)(2y^3)$ _____

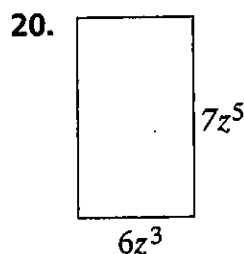
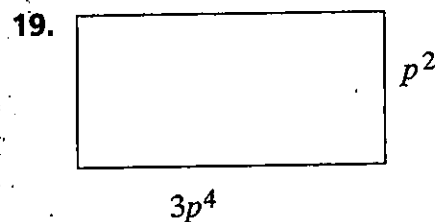
14. $3x^{12} \cdot 2x^3$ _____

15. $m^{30} \cdot m^{12}$ _____

16. $(x^4)(y^2)(x^2)$ _____

17. $(-6x^7)(-9x^{12})$ _____

18. $(h^4)^4$ _____

Find the area of each rectangle.**Compare. Use $>$, $<$, or $=$ to complete each statement.**

21. $(4^3)^2$ $(4^2)^3$

22. $5^3 \cdot 5^4$ 5^{10}

23. $(3^5)^4$ 3^{10}

24. 3^4 9^2

25. $(9^7)^9$ $(9^8)^8$

26. $4^2 \cdot 4^3$ 4^5

27. $(6^2)^2$ $3^4 \cdot 2^4$

28. $5^2 \cdot 5^6$ 5^7

29. $(8^2)^2$ $(8^2)^3$

Practice 4-8**Exponents and Division****Complete each equation.**

1. $\frac{8^n}{8^7} = 8^2$, $n =$ _____

2. $\frac{12x^5}{4x} = 3x^n$, $n =$ _____

3. $\frac{1}{h^5} = h^n$, $n =$ _____

4. $\frac{p^n}{p^8} = p^{-6}$, $n =$ _____

5. $\frac{1}{81} = 3^n$, $n =$ _____

6. $\frac{12^4}{12^n} = 1$, $n =$ _____

Simplify each expression.

7. $\frac{a^3}{a^7}$ _____

8. $\frac{j^5}{j^6}$ _____

9. $\frac{x^7}{x^7}$ _____

10. $\frac{k^5}{k^9}$ _____

11. $\frac{9x^8}{12x^5}$ _____

12. $\frac{2f^{10}}{f^5}$ _____

13. $\frac{3y^4}{6y^{-4}}$ _____

14. n^{-5} _____

15. $\frac{3xy^4}{9xy}$ _____

16. $(-15)^0$ _____

17. $\frac{15h^6k^3}{5hk^2}$ _____

18. $4b^{-6}$ _____

Write each expression without a fraction bar.

19. $\frac{a^7}{a^{10}}$ _____

20. $\frac{4x^2y}{2x^3}$ _____

21. $\frac{x^3y^4}{x^9y^2}$ _____

22. $\frac{12mn}{12m^3n^5}$ _____

23. $\frac{16s^2t^4}{8s^5t^3}$ _____

24. $\frac{21e^4f^2}{7e^2}$ _____

25. Write three different quotients that equal 4^{-5} .

Practice 5-9**Powers of Products and Quotients****Simplify each expression.**

1. $\left(\frac{5}{6}\right)^2$ _____

2. $\left(-\frac{4}{9}\right)^2$ _____

3. $\left(\frac{x^2}{5}\right)^3$ _____

4. $(2x)^3$ _____

5. $(-3y^2)^2$ _____

6. $(5ab^2)^3$ _____

7. $(12mn)^2$ _____

8. $(-10xy^3)^3$ _____

9. $(9qrs^4)^3$ _____

10. $\left(\frac{2x}{9y}\right)^2$ _____

11. $-(a^2b^2)^3$ _____

12. $(2a^3b^2)^4$ _____

13. $\left(\frac{2x}{y}\right)^2$ _____

14. $\left(-\frac{3x}{8y}\right)^2$ _____

15. $\left(\frac{3y^2}{x}\right)^3$ _____

16. $\left(\frac{2x^2y}{xy^3}\right)^5$ _____

Evaluate for $a = 2$, $b = -1$, and $c = \frac{1}{3}$.

17. $(a^2)^3$ _____

18. $2b^3$ _____

19. $(-9c^2)^3$ _____

20. $(a^2b)^2$ _____

21. $(ac)^2$ _____

22. $(b^3)^7$ _____

Complete each equation.

23. $(3b \text{ --- })^2 = 9b^{10}$

24. $(m^2n) \text{ --- } = m^8n^4$

25. $(xy \text{ --- })^2 = x^2y^6$

26. $\left(\frac{3s^2t}{r}\right) \text{ --- } = \frac{9s^4t^2}{r^2}$

27. Write an expression for the area of a square with a side of length $4a^2$.
Simplify your expression.28. Write an expression for the volume of a cube with a side of length $3z^5$.
Simplify your expression.

Practice 2-9

Solving One-Step Inequalities by Adding or Subtracting

Write an inequality for each sentence. Then solve the inequality.

- Six less than n is less than -4 .

- The sum of a number k and five is greater than or equal to two.

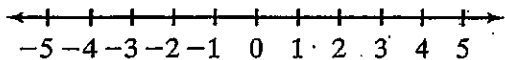
- Nine more than a number b is greater than negative three.

- You must be at least 48 inches tall to ride an amusement park ride, and your little sister is 39 inches tall. How many inches i must she grow before she may ride the ride?

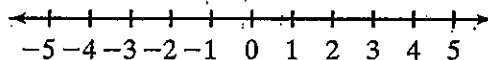
- You need no more than 3,000 calories in a day. You consumed 840 calories at breakfast and 1,150 calories at lunch. How many calories c can you eat for dinner?

Solve each inequality. Graph the solutions.

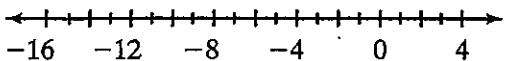
6. $7 + x \geq 9$ _____



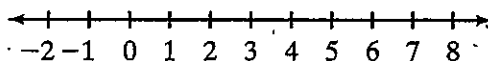
7. $-5 \leq x - 6$ _____



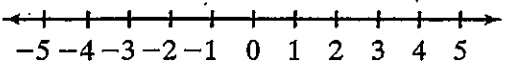
8. $0 \geq x + 12$ _____



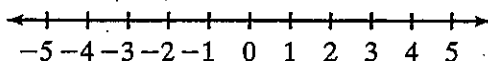
9. $x - 15 \leq -8$ _____



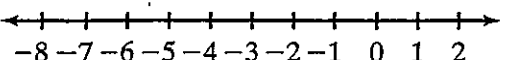
10. $13 + x \geq 13$ _____



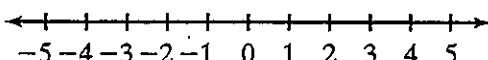
11. $x - 8 > -5$ _____



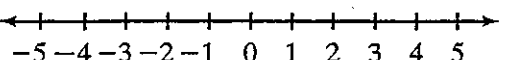
12. $4 + x < -2$ _____



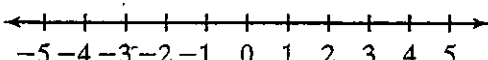
13. $x - 9 > -11$ _____



14. $x - 6 \leq -1$ _____



15. $-4 + x < -4$ _____



Practice 5-7**Solving Equations by Adding or Subtracting Fractions****Solve and check each equation.**

1. $m - \left(-\frac{7}{10}\right) = -1\frac{1}{5}$ _____

2. $k - \frac{3}{4} = \frac{2}{5}$ _____

3. $x - \frac{5}{6} = \frac{1}{10}$ _____

4. $t - \left(-3\frac{1}{6}\right) = 7\frac{2}{3}$ _____

5. $x + \frac{5}{8} = \frac{7}{8}$ _____

6. $k + \frac{4}{5} = 1\frac{3}{5}$ _____

7. $4 = \frac{4}{9} + y$ _____

8. $h + \left(-\frac{5}{8}\right) = -\frac{5}{12}$ _____

9. $n + \frac{2}{3} = \frac{1}{9}$ _____

10. $e - \frac{11}{16} = \frac{7}{8}$ _____

11. $w - 14\frac{1}{12} = -2\frac{3}{4}$ _____

12. $v + \left(-4\frac{5}{6}\right) = 2\frac{1}{3}$ _____

13. $a - 9\frac{1}{6} = -3\frac{19}{24}$ _____

14. $f + \left|-3\frac{11}{12}\right| = 18$ _____

15. $z + \left(-3\frac{2}{5}\right) = -4\frac{1}{10}$ _____

16. $x - \frac{7}{15} = \frac{7}{60}$ _____

17. $h - \left(-6\frac{1}{2}\right) = 14\frac{1}{4}$ _____

18. $p - 5\frac{3}{8} = -\frac{11}{24}$ _____

Solve each equation using mental math.

19. $x + \frac{3}{7} = \frac{5}{7}$ _____

20. $k - \frac{8}{9} = -\frac{1}{9}$ _____

21. $a + \frac{1}{9} = \frac{3}{9}$ _____

22. $g - \frac{4}{5} = -\frac{2}{5}$ _____

Write an equation to solve each problem.

23. Pete's papaya tree grew $3\frac{7}{12}$ ft during the year. If its height at the end of the year was $21\frac{1}{6}$ ft, what was its height at the beginning of the year?
- _____

24. Lee is $1\frac{3}{4}$ ft taller than Jay. If Lee is $6\frac{1}{4}$ ft tall, how tall is Jay?
- _____

Practice 5-8**Solving Equations by Multiplying Fractions****Solve each equation.**

1. $\frac{3}{4}x = \frac{9}{16}$ _____

2. $-\frac{1}{3}p = \frac{1}{4}$ _____

3. $-\frac{3}{8}k = \frac{1}{2}$ _____

4. $\frac{1}{8}h = \frac{1}{10}$ _____

5. $2\frac{2}{3}e = \frac{1}{18}$ _____

6. $-1\frac{2}{7}m = 6$ _____

7. $-\frac{1}{4}p = \frac{1}{18}$ _____

8. $\frac{11}{-12}w = -1$ _____

9. $-3\frac{4}{7}x = 0$ _____

10. $\frac{2}{3}m = 2\frac{2}{9}$ _____

11. $5c = \frac{2}{3}$ _____

12. $-8k = \frac{4}{5}$ _____

13. $\frac{4}{7}y = 4$ _____

14. $2\frac{1}{4}f = \frac{6}{5}$ _____

15. $\frac{10}{11}n = \frac{2}{11}$ _____

16. $\frac{7}{8}c = \frac{7}{6}$ _____

Solve each equation using mental math.

17. $7d = 42$ _____

18. $\frac{1}{4}y = 5$ _____

19. $-3h = \frac{3}{8}$ _____

20. $\frac{1}{5}k = -\frac{1}{3}$ _____

Write an equation to solve each problem.

21. It takes Nancy $1\frac{2}{3}$ min to read 1 page in her social studies book. It took her $22\frac{1}{2}$ min to complete her reading assignment. How long was the assignment? Let m represent the number of pages she read.

22. It takes Gary three hours to drive to Boston. If the trip is 156 miles, what is Gary's average number of miles per hour? Let x represent the miles per hour.

Practice 7-3**Two-Step Equations With Fractions and Decimals****Solve and check each equation.**

1. $0.7n - 1.5 + 7.3n = 14.5$

2. $18p - 45 = 0$

3. $16.3k + 19.2 + 7.5k = -64.1$

4. $h + 3h + 4h = 100$

5. $40 - 5n = -2$

6. $14 = \frac{2}{3}(9y - 15)$

7. $\frac{2}{3}y - 6 = 2$

8. $1.2m + 7.5m + 2.1 = 63$

9. $\frac{7}{8}h - \frac{5}{8} = 2$

10. $93.96 = 4.7p + 8.7p - 2.6p$

11. $9w - 16.3 = 5.3$

12. $88.1 - 2.3f = 72.46$

13. $-15.3 = -7.5k + 55.2$

14. $26e + 891 = -71$

15. $2.3(x + 1.4) = -9.66$

16. $(x - 17.7) + 19.6 = 27.8$

Write an equation to describe each situation. Solve.

17. Jolene bought 3 blouses at one price and 2 blouses priced \$3 below the others. The total cost was \$91.50. Find the prices of the blouses.
-
- _____

18. A car rented for \$29 per day plus \$.08 per mile. Julia paid \$46.12 for a one-day rental. How far did she drive?
-
- _____

By what number would you multiply each equation to clear denominators or decimals? Do not solve.

19. $\frac{1}{3}z + \frac{1}{6} = 5\frac{1}{6}$

20. $3.7 + 2.75k = 27.35$

NAME: _____

P.I. A.A.25: Solve equations involving fractional expressions

Solve:

1. $15 = -\frac{1}{2}(-12x + 2)$

[A] $\frac{3}{8}$ [B] $\frac{8}{3}$ [C] $\frac{7}{3}$ [D] $\frac{3}{7}$

2. $12 = \frac{1}{9}(36x + 18)$

[A] $\frac{7}{2}$ [B] $\frac{2}{5}$ [C] $\frac{2}{7}$ [D] $\frac{5}{2}$

3. Solve for x : $\frac{x-8}{7} = \frac{7}{10}$

[A] $-\frac{31}{10}$ [B] $\frac{129}{10}$ [C] $\frac{10}{129}$ [D] 129

4. Solve: $\frac{5}{8}y - 8 = 2$

[A] 15 [B] $6\frac{1}{4}$ [C] 16 [D] $-9\frac{3}{5}$

5. Solve for x : $\frac{x+1}{6} = \frac{4}{5}$

[A] $\frac{19}{5}$ [B] $\frac{29}{5}$ [C] $\frac{5}{19}$ [D] 19

Solve:

6. $\frac{6}{5}y - 4 = 8$

[A] $14\frac{2}{5}$ [B] 8 [C] $3\frac{1}{3}$ [D] 10

7. $\frac{x}{2} + \frac{x}{9} = 3$

NAME: _____

Solve:

8. $\frac{x}{2} + \frac{x}{6} = 2$

9. $-\frac{1}{4}(-16x - 8) = 18$

10. $0 = \frac{8}{12}y - 40$

11. $-\frac{1}{3}(-9x - 3) = 17$

12. $\frac{x}{2} + \frac{x}{4} = 6$

13. $0 = \frac{3}{18}y + 12$

14. $0 = \frac{6}{17}y - 36$

15. $\frac{1}{6}(36x + 12) = 10$

16. $\frac{x}{2} + \frac{x}{8} = 8$

17. $-\frac{1}{5}(-25x + 15) = 20$

[1] B

[2] D

[3] B

[4] C

[5] A

[6] D

[7] $\frac{54}{11}$

[8] 3

[9] 4

[10] 60

[11] $\frac{16}{3}$

[12] 8

[13] -72

[14] 102

[15] $\frac{4}{3}$

[16] $\frac{64}{5}$

[17] $\frac{23}{5}$

Practice 8-2

Equations With Two Variables

Solve each equation for y .

1. $3y = 15x - 12$

$y = \underline{\hspace{2cm}}$

2. $5x + 10 = 10y$

$y = \underline{\hspace{2cm}}$

3. $3y - 21 = 12x$

$y = \underline{\hspace{2cm}}$

4. $5y + 3 = 2y - 3x + 5$

$y = \underline{\hspace{2cm}}$

5. $-2(x + 3y) = 18$

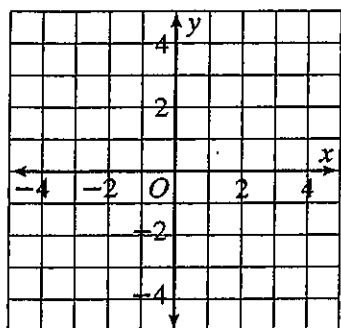
$y = \underline{\hspace{2cm}}$

6. $5(x + y) = 20 + 3x$

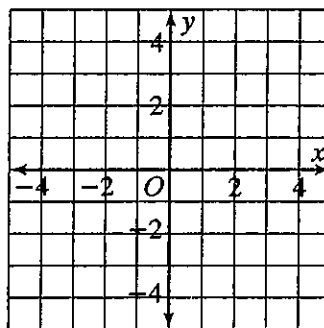
$y = \underline{\hspace{2cm}}$

Graph each linear equation.

7. $y = -0.5x + 4$

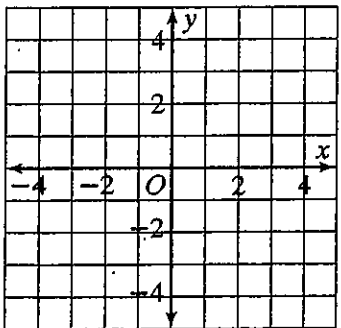


8. $y = 4$



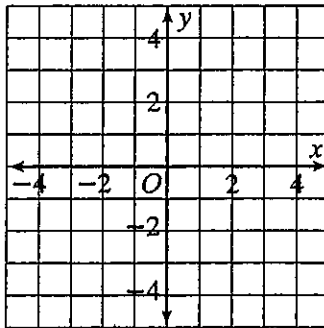
9. $2x - 3y = 6$

$y = \underline{\hspace{2cm}}$



10. $-10x = 5y$

$y = \underline{\hspace{2cm}}$



Find the solution of $y = 3x - 4$ for the given value of x .

11. 3

12. -2

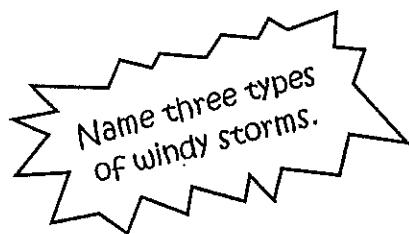
13. 0

14. 5

15. -4

16. -1

Windy Weather Mystery Math



1. _____
2. _____
3. _____

2.55	1.56	3.15	4.74	9.56	9.61	7.30	6.85	3.49
G	R	L	K	B	P	M	X	Y

7.78	2.31	4.11	8.77	2.84	2.63	7.58	5.55	1.75
E	V	U	O	I	D	S	A	Z

3.74	9.89	1.42	4.24	6.32	3.31	8.63	8.06
W	C	T	F	H	N	J	Q

Round each decimal to the nearest hundredth. Write the answer in the middle square then find the letter that corresponds to your answer in the key above. Write the corresponding letter in the bottom square to uncover three types of windy weather. The first one is done for you.

6.318	4.107	1.562	1.559	2.843	9.891	5.548	3.305	7.776
6.32								
h								

9.559	3.154	2.837	1.752	1.746	5.553	1.564	2.625

1.422	8.770	1.557	3.314	5.546	2.631	8.765

Our Government Mystery Math

Name the three
branches of the
U.S. government.

1. _____
2. _____
3. _____

4.1	1.7	3.6	3.9	5.2	4.7	9.9	7.9	8.8
G	R	L	K	B	P	M	X	Y

2.6	6.8	15.1	1.8	5.7	2.8	1.5	7.7	10.5
E	V	U	O	I	D	S	A	Z

12.7	5.5	4.5	2.3	1.6	9.5	11.5	6.6
W	C	T	F	H	N	J	Q

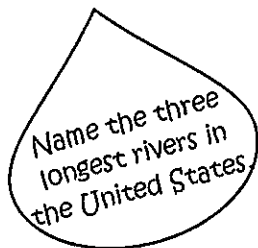
Round each decimal to the nearest tenth. Write the answer in the middle square then find the letter that corresponds to your answer in the key above. Write the corresponding letter in the bottom square to uncover the three branches of government. The first one is done for you.

3.63	2.59	4.10	5.73	1.52	3.59	7.65	4.45	5.67	6.79	2.62
3.6										
I										

11.49	15.09	2.79	5.69	5.45	5.72	7.73	3.56

2.60	7.90	2.57	5.54	15.14	4.51	5.70	6.84	2.64

Three Long Rivers Mystery Math



1. _____
2. _____
3. _____

1	7	21	4	2	3	24	14	20
G	R	L	K	B	P	M	X	Y

8	13	12	6	9	23	15	26	5
E	V	U	O	I	D	S	A	Z

19	16	10	17	25	18	22	11
W	C	T	F	H	N	J	Q

Round each decimal to the nearest whole number. Write the answer in the middle square then find the letter that corresponds to your answer in the key above. Write the corresponding letter in the bottom square to uncover the three longest rivers in the United States. The first one is done for you.

23.9	8.75	15.20	14.9	9.3	15.45	14.65	8.9	2.95	3.25	8.5
24										
m										

23.8	9.12	14.75	14.8	5.8	11.9	6.72	9.26

20.45	12.3	3.88	5.95	17.62

Answers to Summer Packet

2F: Vocabulary Review

1. D 2. A 3. C 4. E 5. B 6. D 7. C 8. A 9. E 10. B

1D: Visual Vocabulary Practice

1. variable 2. algebraic expression 3. opposites
4. quadrants 5. x-axis 6. y-axis 7. ordered pair
8. y-coordinate 9. origin

2D: Visual Vocabulary Practice

1. terms 2. solution of inequality 3. constant 4. coefficient
5. solution of equation 6. open sentence 7. equation
8. inverse operations 9. expression

4D: Visual Vocabulary Practice

1. exponent 2. base 3. greatest common divisor
4. prime numbers 5. simplest form 6. equivalent fractions
7. rational number 8. standard notation 9. scientific notation

4F: Vocabulary Review

1. F 2. A 3. D 4. B 5. E 6. G 7. C 8. F 9. C 10. D

7D: Visual Vocabulary Practice

1. consecutive integers 2. Distributive Property 3. area formula
4. perimeter formula 5. two-step inequality
6. distance formula 7. variable 8. least common multiple
9. inequality

8D: Visual Vocabulary Practice

1. vertical-line test 2. slope 3. slope-intercept form
4. relation 5. constant of variation 6. direct variation
7. linear equation 8. system of linear equations
9. linear equality

Practice 1-1

1. 25(5) 2. 25q 3. 12(7) 4. 12y 5. $\frac{21}{4}$
6. $\frac{q}{4}$ 7. $k - 9$ 8. $\frac{m}{6}$ 9. 2x 10. $2x + 4$
11. $18 + b$ 12. $3(2 + a)$ 13. algebraic; d
14. numerical 15. numerical 16. algebraic; p
17. algebraic; k 18. numerical 19. numerical
20. algebraic; x 21. $24 \cdot 5$ 22. $\frac{d}{7}$

Practice 4-2

1. 625 2. -125 3. -196 4. -64 5. 1
6. 729 7. 225 8. -3 9. 86 10. 3^4 11. k^5
12. $(-9)^3 m^3$ 13. $g^4 h$ 14. $7a^2 b^3$ 15. $-16m^3 n^2$
16. $(-3)^2 d^2 e^3$ 17. -8; -8 18. 0 19. 256; 256
20. 7 21. 12 22. -18 23. -150 24. 40
25. 28 26. 9 27. 4 28. -9

Practice 4-7

1. 4 2. 9 3. 10 4. 3 5. 3 6. 8 7. z^{15}
8. $-m^{12}$ 9. -3^6 10. x^7 11. y^9 12. $-y^7$
13. $6y^5$ 14. $6x^{15}$ 15. m^{42} 16. $x^6 y^2$ 17. $54x^{19}$
18. h^{16} 19. $3p^6$ 20. $42z^8$ 21. = 22. < 23. >
24. = 25. < 26. = 27. = 28. > 29. <

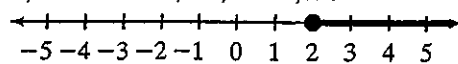
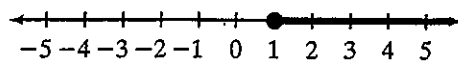
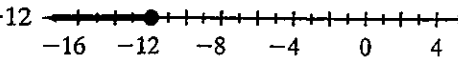
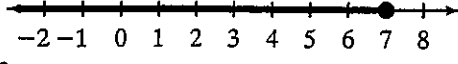
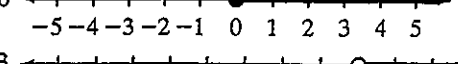
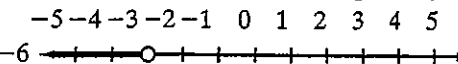
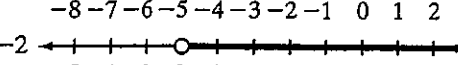
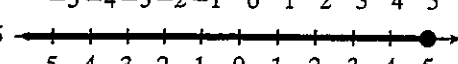
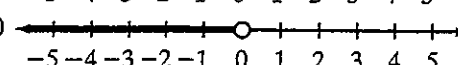
Practice 4-8

1. 9 2. 4 3. -5 4. 2 5. -4 6. 4 7. $\frac{1}{a^4}$
8. $\frac{1}{j}$ 9. 1 10. $\frac{1}{k^4}$ 11. $\frac{3x^3}{4}$ 12. $2f^5$ 13. $\frac{y^8}{2}$
14. $\frac{1}{n^5}$ 15. $\frac{y^3}{3}$ 16. 1 17. $3h^5 k$ 18. $\frac{4}{b^6}$
19. a^{-3} 20. $2x^{-1} y$ 21. $x^{-6} y^2$ 22. $m^{-2} n^{-4}$
23. $2s^{-3} t$ 24. $3e^2 f^2$ 25. Answers may vary. $\frac{1}{4^3}, \frac{4^2}{4^7}, \frac{4^{-4}}{4}$

Practice 5-9

1. $\frac{25}{36}$ 2. $\frac{16}{81}$ 3. $\frac{x^6}{125}$ 4. $8x^3$ 5. $9y^4$ 6. $125a^3 b^6$
7. $144m^2 n^2$ 8. $-1,000x^3 y^9$ 9. $729q^3 r^3 s^{12}$
10. $\frac{4x^2}{81y^2}$ 11. $-a^6 b^6$ 12. $16a^{12} b^8$ 13. $\frac{4x^2}{y^2}$
14. $\frac{9x^2}{64y^2}$ 15. $\frac{27y^6}{x^3}$ 16. $\frac{32x^5}{y^{10}}$ 17. 64 18. -2
19. -1 20. 16 21. $\frac{4}{9}$ 22. -1 23. 5 24. 4
25. 3 26. 2 27. $(4a^2)^2 = 16a^4$
28. $(3z^5)^3 = 27z^{15}$

Practice 2-9

1. $n - 6 < -4; n < 2$
2. $k + 5 \geq 2; k \geq -3$
3. $b + 9 > -3; b > -12$
4. $39 + i \geq 48; i \geq 9$
5. $840 + 1,150 + c \leq 3,000; c \leq 1,010$
6. $x \geq 2$ 
7. $x \geq 1$ 
8. $x \leq -12$ 
9. $x \leq 7$ 
10. $x \geq 0$ 
11. $x > 3$ 
12. $x < -6$ 
13. $x > -2$ 
14. $x \leq 5$ 
15. $x < 0$ 

Practice 5-7

1. $-\frac{9}{10}$
2. $1\frac{3}{20}$
3. $\frac{14}{15}$
4. $4\frac{1}{2}$
5. $\frac{1}{4}$
6. $\frac{4}{5}$
7. $3\frac{5}{9}$
8. $\frac{5}{24}$
9. $-\frac{5}{9}$
10. $-\frac{3}{16}$
11. $11\frac{1}{3}$
12. $7\frac{1}{6}$
13. $5\frac{3}{8}$
14. $14\frac{1}{12}$
15. $-\frac{7}{10}$
16. $\frac{7}{12}$
17. $7\frac{3}{4}$
18. $4\frac{11}{12}$
19. $\frac{7}{9}$
20. $\frac{7}{9}$
21. $\frac{2}{9}$
22. $\frac{2}{5}$
23. $h + 3\frac{7}{12} = 21\frac{1}{6}$
 $h = 17\frac{7}{12}$ ft
24. $h + 1\frac{3}{4} = 6\frac{1}{4}$; $h = 4\frac{1}{2}$ ft

Practice 5-8

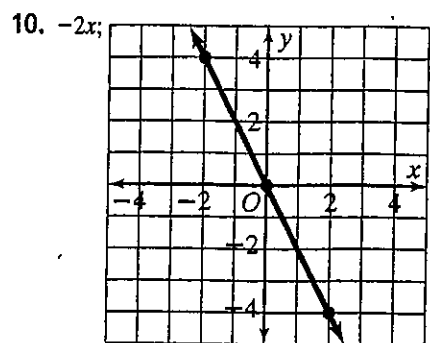
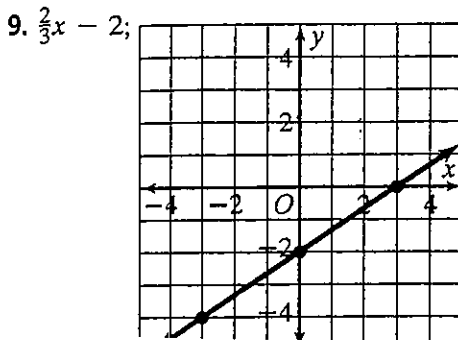
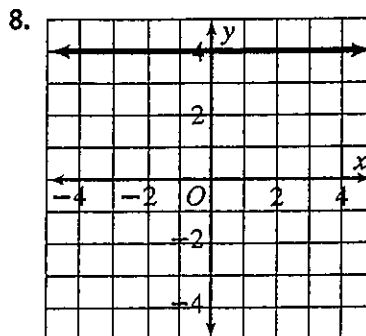
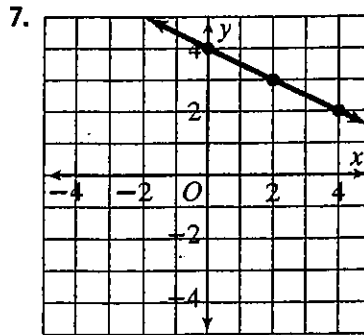
1. $x = \frac{3}{4}$
2. $p = -\frac{3}{4}$
3. $k = -1\frac{1}{3}$
4. $h = \frac{4}{5}$
5. $e = \frac{1}{48}$
6. $m = -4\frac{2}{3}$
7. $p = -\frac{2}{9}$
8. $w = 1\frac{1}{11}$
9. $x = 0$
10. $m = 3\frac{1}{3}$
11. $c = \frac{2}{13}$
12. $k = -\frac{1}{10}$
13. $y = 7$
14. $f = \frac{8}{15}$
15. $n = \frac{1}{5}$
16. $c = 1\frac{1}{3}$
17. $d = 6$
18. $y = 20$
19. $h = -\frac{1}{8}$
20. $k = -1\frac{2}{3}$
21. $1\frac{2}{3}m = 22\frac{1}{2}$; $m = 13\frac{1}{2}$ pages
22. $3x = 156$; $x = 52$ mi/h

Practice 7-3

1. $n = 2$
2. $p = 2.5$
3. $k = -3.5$
4. $h = 12\frac{1}{2}$
5. $n = 8.4$
6. $y = 4$
7. $y = 12$
8. $m = 7$
9. $h = 3$
10. $p = 8.7$
11. $w = 2.4$
12. $f = 6.8$
13. $k = 9.4$
14. $e = -37$
15. $x = -5.6$
16. $x = 25.9$
17. $3x + 2(x - 3) = 91.50$; \$19.50 and \$16.50
18. $29 + 0.08m = 46.12$; $m = 214$ miles
19. 6
20. 100

Practice 8-2

1. $5x - 4$
2. $\frac{1}{2}x + 1$
3. $4x + 7$
4. $-x + \frac{2}{3}$
5. $-\frac{1}{3}x - 3$
6. $-\frac{2}{5}x + 4$



11. $y = 5$
12. $y = -10$
13. $y = -4$
14. $y = 11$
15. $y = -16$
16. $y = -7$

Rounding
windy weather: hurricane, blizzard, tornado

Gov.: legislative, judicial, executive

Rivers: mississippi, missouri, Yukon