January 14, 2019, Monday

$4k+7k^3-1$ ✓ ✓ ✓

Simplify each expression.

1) $(2p^3-3p^2)+(p^2+4p^2) = 3p^3+1p^2$ $2p^3-2p^2$ $=3p^3+p^2$

2) $(2k+3k^2)-(1+2k-4k^2)$

Find each product.

3) $7(3k+4)$ $21k+28$

4) $(m+5)(m-1)$ $m^2+5m-1m-5$ m^2+4m-5

Jan 10-10:34 AM

Quiz Review

1) A
2) B
3) D
4) C
5) A
6) C
7) B
8) C
9) $5(n+20)$
10) $\frac{n+6}{3}$

2) $5x+2(x-1)=x+10$
$5x+2x-2=x+10$
$7x-2=x+10$
$-10 \quad -10$
$7x-12=x$
$-7x \quad -7x$
$-12=-6x$
$-6 \quad -6$
$2=x$

Jan 14-9:28 AM

U1T Review Name _____

1. Convert: Use your green sheet! 43 miles to feet $43\text{mi}\left(\frac{5280\text{ft}}{1\text{mi}}\right)=227040\text{ft}$
2. Convert: Use your green sheet! 620 inches to cm $620\text{in}\left(\frac{2.54\text{cm}}{1\text{in}}\right)=1574.8\text{cm}$
3. Convert: Use your green sheet! 30 ft/sec to miles/hour $30\frac{\text{ft}}{\text{sec}}\left(\frac{1\text{mi}}{5280\text{ft}}\right)\left(\frac{60\text{sec}}{1\text{min}}\right)\left(\frac{60\text{min}}{1\text{hr}}\right)=20.5\frac{\text{mi}}{\text{hrs}}$
4. Convert: Use your green sheet! How many seconds are there in a week? $\frac{60\text{sec}}{1\text{min}}\left(\frac{60\text{min}}{1\text{hr}}\right)\left(\frac{24\text{hrs}}{1\text{dy}}\right)\left(\frac{7\text{dy}}{1\text{wk}}\right)=\frac{604800\text{sec}}{1\text{wk}}$
5. Write as an algebraic expression: Quentin has x markers. Kellen, Garrett, and Ben then gave Quentin an additional y markers each. Write an expression to represent the number of markers Quentin has now. $Q=x$ $K=y$ $G=y$ $B=y$ $x+y+y+y$ $x+3y$
6. Write as an algebraic expression: *Three times the difference of the cube of x and the square of y* $3(x^3-y^2)$
7. Write as an algebraic expression: *Add 5 to the product of 8 and x, then divide by 2* $\frac{8x+5}{2}=\frac{5}{2}+\frac{8x}{2}$
8. Identify the terms, coefficients, and constant $36x^3+27x^2-18x-9$
Terms: 4 Coefficients: 36, 27, -18 Constant: -9
9. Suppose $5(3-y)=7x$. When $y=-10$, what is the value of x? $5(3-10)=7x$ $5(-7)=7x$ $\frac{-35}{7}=\frac{7x}{7}$ $-5=x$
10. A rectangle has a length of 10 m and a width of 200 cm. What is the perimeter of the rectangle? $P=2l+2w$ $P=2(10)+2(200)$ $P=20+400$ $P=420$ $P=2(10)+2(2)$ $P=24\text{m}$
11. Simplify the expression, then determine how many terms are in the simplified expression. $2(3x+3)+x(x^2+4x)+5$ $6+2x+x^3+4x^2+5$ $11+3x-4x^2$ 3terms SF: $-4x^2+3x+11$

Jan 10-10:35 AM

12. Add the following polynomial. $(5x^2-8x-6)+(7x^2-9x-3)$ $12x^2-17x-9$
13. Subtract the following polynomial. $(3x^2-5x-9)-(6x^2-3x+11)$ $-3x^2+2$
14. Multiply the following binomials. $(x-6)(x+7)$ $x^2+7x-6x-42$ x^2+x-42
15. Multiply the following binomials. $(x-4)^2=(x-4)(x-4)$ $x^2-4x-4x+16$ $x^2-8x+16$
16. Classify the following polynomial by number of terms and by degree: $4x^3+3x^2+2x$
Name by terms: 3 Name by degree: 3=cubic
17. Sophia has 8 books in her locker. All the books are either personal books or school books. She has three times as many school books as personal books. How many schools books does Sophia have in her locker? $S=3P$ $S+P=8$ $3P+P=8$ $4P=8$ $P=2$ $S=3(2)=6$
18. Simplify $\sqrt{112}$ $4\sqrt{7}$
19. Simplify $\sqrt{175}$ $5\sqrt{7}$
20. Simplify $-4\sqrt{3}-3\sqrt{3}$ $-7\sqrt{3}$
21. Simplify $3\sqrt{6}+2\sqrt{54}$ $9\sqrt{6}$
22. Simplify $3\sqrt{2}\cdot\sqrt{2}$ 6
23. Simplify $5\sqrt{10}(3+\sqrt{5})$ $15\sqrt{10}+25\sqrt{2}$
24. Label the following as rational or irrational: $-\frac{30}{6}=5$ R; π I; 3.14 R; 8.14 R
25. Which measurement is more precise (exact)? 84 g or 2.5 mg

Use a calculator

goes to the hundredths

Jan 10-10:39 AM

January 15, 2019, Tuesday

1. 43 miles into feet $43\text{mi}\left(\frac{5280\text{ft}}{1\text{mi}}\right)=227040\text{ft}$
2. 165 pounds into kilograms $165\text{lb}\left(\frac{1\text{kg}}{2.2\text{lb}}\right)=75\text{kg}$
3. 5,400 inches to miles $5400\text{in}\left(\frac{1\text{ft}}{12\text{in}}\right)\left(\frac{1\text{mi}}{5280\text{ft}}\right)=.085\text{mi}$
9. 1.09 g/mL to lbs/qt $1.09\frac{\text{g}}{\text{mL}}\left(\frac{1\text{lbs}}{454\text{g}}\right)\left(\frac{946\text{mL}}{1\text{qt}}\right)=2.27\frac{\text{lbs}}{\text{qt}}$ ...test

January 16, 2019, Wednesday

12) Multiply the following binomials. $(x-15)(x-3)$
a) $x^2-18x-18$
b) $x^2-18x-45$
c) $x^2-18x+45$
d) $x^2-12x+45$
$x^2-3x-15x+45$ $x^2-18x+45$

14) Which expression has a value that is a rational number?
a) $\sqrt{10}+16$
b) $\sqrt{3}+0$
c) $2(\sqrt{5}+\sqrt{7})$
d) $\sqrt{9}+\sqrt{4}=5$ MGSE9–12.N.RN.3

18) Which of these is a rational number?
a) $\sqrt{5}$
b) $\pi+2$
c) $-\frac{1}{4}=.25$ $-\frac{1}{3}=.33\overline{3}$ $-\frac{1}{5}=.2$
d) None of these MGSE9–12.N.RN.3

Number = 2 repeating dec = $.1\overline{11}$

29) Subtract $(-5x^2+x-5)-(-3x^2-8x-3)$
a) $-2x^2+9x+5$
b) $-2x^2+9x-2$
c) $-2x^2+9x-8$
d) $-2x^2-7x-2$ MGSE9–12.A.APR.1
$-5x^2+x-5+3x^2+8x+3$
$-2x^2+9x-2$

$(x-15)(x-3)$
$x^2-3x-15x+45$
$x^2-18x+45$

Jan 10-10:39 AM

Name: _____ Date: _____

Algebraic Properties

Properties of Equality	Property	Example(s)
Addition Property of Equality	If a = b, then a + c = b + c.	x=3 x+4=3+4
Subtraction Property of Equality	If a = b, then a − c = b − c	x=10 x−6=10−6
Multiplication Property of Equality	If a = b, then ac = bc	x=7 2x=2(7)
Division Property of Equality	If a = b, then a/c = b/c	x=4 $\frac{x}{2}=\frac{4}{2}$
Symmetric Property of Equality	If a = b, then b = a	x=3 3=x
Transitive Property of Equality	If a = b and b = c, then a = c	x=y y=4 x=4

Properties of Operations and Identities	Property	Example(s)
Commutative Property of Addition	a + b = b + a	3+4 = 4+3
Commutative Property of Multiplication	a · b = b · a	6·4 = 4·6
Associative Property of Addition	a + (b + c) = (a + b) + c	2+(6+3)=(2+6)+3
Associative Property of Multiplication	a · (b · c) = (a · b) · c	1·(3·2)=(1·3)·2
Distributive Property	a · (b + c) = a · b + a · c	3(4+5)=3·4+3·5
Multiplicative Identity Property	a · 1 = a	8·1=8
Additive Inverse Property	a + (-a) = 0	6+−6=0
Multiplicative Inverse Property	$\frac{a}{b}\cdot\frac{b}{a}=1$	$\frac{4}{3}\cdot\frac{3}{4}=1$
Multiplicative Property of Zero	a · 0 = 0	9·0=0

Jan 10-11:13 AM

Properties of Equality

Identify the property of equality:

1.	9·7 = 7·9	Comm. P.O. Mult.
2.	2·(3·4) = (2·3)·4	Asso. P.O. Mult.
3.	4(a + b) = 4a + 4b	Dis. property
4.	14 + 6 = 6 + 14	Com. PO Add
5.	3(6a) = (3·6)a	Asso.P.O.Mult
6.	If a = b then a + 4 = b + 4	Add. P.O. Equal.
7.	55 + 6 = 6 + 55	Com. P.O.Add
8.	(x + 3) + y = x + (3 + y)	Asso.P.O.Add
9.	If a = c, then a-5 = c - 5	Sub PO Equ
10.	9 + (5 + 35) = (9 + 5) + 35	Asso.P.O.Add
11.	8(a +c)= 8a +8c	Dis. Prop.
12.	A + B = B + A	Com.P.O.Add
13.	4(3·z) = (4·3)z	Assq.P.O.Mult

Jan 10-11:13 AM

Properties of Equality Practice Name: _____ Period: ___

For each problem, complete the table by filling in the missing equation or step.

1.

Equation	Step
3x + 12 = 18	Original Equation
3x = 6	Subtraction property of equality
x = 2	

2.

Equation	Step
3k + 5 = 17	Original Equation
	Subtraction property of equality
k = 4	Division property of equality

3.

Equation	Step
3(5x - 1) = 13x + 5	Original Equation
15x - 3 = 13x + 5	
2x - 3 = 5	Subtraction property of equality
2x = 8	
x = 4	

4.

Equation	Step
$\frac{v+9}{3}=8$	Original equation
v + 9 = 24	
	Subtraction property of equality

Jan 10-11:13 AM

5.

Equation	Step
2(n + 5) = -2	Original equation
n = -6	

6.

Equation	Step
7y – 84 = 2y + 61	Original Equation
y = 29	

7.

Equation	Step
$\frac{x+5}{6}=2$	Original Equation
x = 7	

8.

Equation	Step
2(12x – 1) = 4(x + 2)	Original Equation
$x=\frac{1}{2}$	

Jan 10-11:14 AM

GSE Algebra I Unit 2A Practice

Properties of Equalities

Identify the property of equality that justifies each missing step or equation in each of the following tables.

1.

Equation	Steps
1. 3x + 12 = 8x – 18	Given
2. −3x −3x 12 = 5x – 18	Subtr PO Equ
3. +18 +18 30 = 5x	Addition Property of Equality
4. 6 = x	Division PO Equ

2.

Equation	Steps
1. 3k + 5 = 17	Given
2. 3k = 12	
3.	Division Property of Equality

3.

Equation	Steps
1. -6a – 5 = -95	Given
2.	
3.	

Jan 10-11:14 AM

GSE Algebra I Unit 2A Practice

4.

Equation	Steps
1. 3(5x + 1) = 13x + 5	Given
2.	
3.	
4.	
5.	

5.

Equation	Steps
1. 7y – 84 = 2y + 61	Given
2.	
3.	
4.	

6.

Equation	Steps
1. 4(5n + 7) – 3n = 3(4n – 9)	Given
2. 20n + 28 − 3n = 12n − 27	Distr Prop
3. 17n + 28 = 12n − 27 −12n −12n 5n + 28 = −27	Combining like terms
4. −28 −28	Subt PO Equ
5. 5n = −55	Subt PO Eqn
6. n = −11	Div. PO Eqn

Jan 10-11:16 AM

January 17, 2019, Thursday

List 3 algebraic properties and an example for each.

Jan 10-11:16 AM

GSE Algebra 1
Properties Quick Check

Name _____
Block _____ Date _____

For 1-10, Match the following property with its example.

_____ 1. Commutative Property of Addition	A. $6 \cdot 0 = 0$
_____ 2. Commutative Property of Multiplication	B. $6 + (5 + 1) = (6 + 5) + 1$
_____ 3. Associative Property of Addition	C. $\frac{5}{8} \cdot \frac{8}{5} = 1$
_____ 4. Associative Property of Multiplication	D. $3(2x + 8) = 6x + 24$
_____ 5. Distributive Property	E. $10 + (-10) = 0$
_____ 6. Additive Identity Property	F. $7 \cdot 8 = 8 \cdot 7$
_____ 7. Multiplicative Identity Property	G. $8 \cdot 1 = 8$
_____ 8. Additive Inverse Property	H. $2 \cdot (3 \cdot 8) = (2 \cdot 3) \cdot 8$
_____ 9. Multiplicative Inverse Property	I. $9 + 0 = 9$
_____ 10. Multiplicative Property of Zero	J. $8 + 6 = 6 + 8$

For 11-12, Identify the property of equality that justifies each missing step or equation in each of the tables below.

11.

Statement	Reason
1. $14x + 8 = 12x + 10$	Given
2. $2x + 8 = 10$	
3. $2x = 2$	Subtraction Property of Equality
4. $x = 1$	

12.

Statement	Reason
1. $4(2x + 1) = 2x + 28$	Given
2.	Distributive Property
3. $6x + 4 = 28$	
4.	Subtraction Property of Equality
5. $x = 4$	Division Property

Jan 10-11:21 AM

Literal Equations and Dimensional Analysis Task

1. The area of a triangle is found using the formula $A = \frac{1}{2}bh$.
   a. Find the area of a triangle with a height of 6cm and a base of 3cm.
   b. Solve the area formula for b.
   c. Find the base of a triangle whose area is 20in and whose height is 4in.
2. The formula $d = rt$ tells the distance traveled at a given rate and time.
   a. Solve the equation for t.
   b. Determine how long it will take an airplane to travel 2,000 miles if it flies:
      i. 200 miles per hour
      ii. 400 miles per hour
      iii. 600 miles per hour
3. The formula for the perimeter of a package is $P = 2L + 2W$, where L is the length and W is the width.
   a. Solve the formula for length.
   b. What is the length of a package that has a perimeter of 22 cm and a width of 5 cm?
4. The formula $S = L - rL$ shows the relationship among the sale price S, the list price L, and the discount rate r.
   a. Solve for r.
   b. Use the new formula to find the discount rate as a decimal and as a percent.
      i. Sale price of $40 and list price of $50.
      ii. Sale price of $102 and list price of $120.
5. The volume of a box V is given by the formula $V = lwh$.
   a. Solve the formula for h.
   b. What is the height of a box with a volume of 50 cubic meters, length of 10 meters, and width of 2 meters?

Jan 10-11:19 AM

Literal Equations and Dimensional Analysis Task

1. The area of a triangle is found using the formula $A = \frac{1}{2}bh$.
   a. Find the area of a triangle with a height of 6cm and a base of 3cm.
   b. Solve the area formula for b.
   c. Find the base of a triangle whose area is 20in and whose height is 4in.
2. The formula $d = rt$ tells the distance traveled at a given rate and time.
   a. Solve the equation for t.
   b. Determine how long it will take an airplane to travel 2,000 miles if it flies:
      i. 200 miles per hour
      ii. 400 miles per hour
      iii. 600 miles per hour
3. The formula for the perimeter of a package is $P = 2L + 2W$, where L is the length and W is the width.
   a. Solve the formula for length.
   b. What is the length of a package that has a perimeter of 22 cm and a width of 5 cm?
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5. The volume of a box V is given by the formula $V = lwh$.
   a. Solve the formula for h.
   b. What is the height of a box with a volume of 50 cubic meters, length of 10 meters, and width of 2 meters?

Jan 10-11:20 AM

GSE Algebra 1 Unit 2A Practice

Solving for Missing Variable

Ex 1) $2x + y = 8$ (x) Do | Undo Ex 2) $\frac{x+3}{5} = y$ (x) Do | Undo

Practice Problems:
Rewrite each equation in terms of the indicated (Letter).

1) P = IRT **(T)**
2) P = 2(L + W) **(W)**
3) y = 5x - 10 **(x)**
4) 2x - 3y = 9 **(y)**
5) $\frac{x+y}{3} = 5$ **(x)**
6) y = mx + b **(b)**
7) ax + by = c **(y)**
8) V = LWH **(L)**
9) ax + by = c **(x)**
10) 2x - 3y = 8 **(x)**

Jan 10-11:22 AM

GSE Algebra 1 Unit 2A Practice

Rewrite each equation in terms of the indicated (Letter).

1) P = 2L + 2W **(W)**
2) $S = 2\pi rh$ **(h)**
3) $E = mc^2$ **(m)**
4) -20x – 5y = 30 **(y)**
5) $A = \frac{bh}{2}$ (b)
6) y = mx + b **(x)**
7) $V = \frac{1}{3}Bh$ **(h)**
8) $A = \frac{a+b+c}{3}$ **(c)**
9) $m = \frac{2E}{v^2}$ (E)
10) 6x + 3y = -15 **(y)**

Jan 10-11:22 AM

January 11, 2019, Friday

Solve: y = mx + b for b

Solve

Jan 10-11:23 AM

load 2 more assignments!

Jan 10-11:25 AM