Algebra 1

Name Key

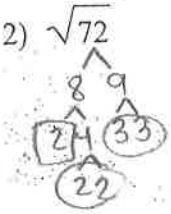
Chapter 1 Skills Review WS - Aug 22

Simplify.

1) $\sqrt{18}$

$3\sqrt{2}$

2) $\sqrt{72}$



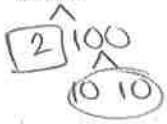
$6\sqrt{2}$

3) $-3\sqrt{72}$

$-3 \cdot 6\sqrt{2}$

$-18\sqrt{2}$

4) $-2\sqrt{200}$



$-2 \cdot 10\sqrt{2}$

$-20\sqrt{2}$

Classify each number as rational, irrational, integer, whole, or natural. List all that apply.

5) $\sqrt{81} = 9$

real, rational, natural, whole, integer

6) $\sqrt{200}$

real, irrational

7) -6.9375

real, rational

8) -4

real, rational, integer

Translate these expressions into words

9) The quotient of seven and the product of negative thirteen and a number

$\frac{-13x}{7}$

10) The sum of eight and half of a number

$\frac{1}{2}n + 8$

11) Six times a number subtracted from twenty-five

$25 - 6x$

12) The difference of seventeen and the quantity of the sum of fifteen and a number.

$(x + 15) - 17$

13) Four times the sum of thirty-three and a number.

$4(33 + x)$

14) Eight time a number subtracted by eleven.

$8x - 11$

Name the property that is illustrated in each equation.

46. $5 + x = x + 5$ Commutative

47. $x - 2 = -2 + x$ commutative

48. $2 + (3 + y) = (2 + 3) + y$ Associative

49. $3(2r - 7) = 3(2r) - 3(7)$ Distributive

50. $(2 + g) + 3 = 2 + (g + 3)$ Associative

51. $45x - 35 = 5(9x) - 5(7)$ Distributive

---

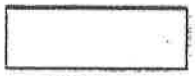
58. Ariel has 19 more CDs than her sister Tiffany has. Victor has 3 times as many CDs as Ariel has. Which expression can be used to show how many CDs the three have in total?

Ⓐ $19 + 3x$ Ⓑ $51 + 3x$ Ⓒ $76 + 3x$ Ⓓ $76 + 5x$

$A = 19 + x$
$V = 3(19 + x)$
$T = x$
$19 + x + 3(19 + x) + x$
$76 + 5x$

59. Which expression can be used to represent the perimeter of the rectangle?

Ⓕ $16k$ Ⓗ $3k + 13$
Ⓖ $32k$ Ⓙ $6k + 26$



$2k + 10 + 2k + 10 + 3 + k + 3 + k$
$6k + 26$

60. Which equation is an example of the Distributive Property?

Ⓐ $(25 + 18) + 33 = 25 + (18 + 33)$ Ⓒ $33 \cdot 25 + 33 \cdot 18 = 33 \cdot (25 + 18)$
Ⓑ $33 + (25 \cdot 18) = (25 \cdot 18) + 33$ Ⓓ $3 + 25 \cdot 33 + 18 = 18 + 33 \cdot 25 + 33$

---

65. Fill in the missing justifications.

Procedure	Justification
$11e - 7 - 3e = 11e + (-7) + (-3)e$	Definition of subtraction
$= 11e + (-3)e + (-7)$	a. Commutative
$= [11e + (-3)e] + (-7)$	b. Associative
$= [11 + (-3)]e + (-7)$	c. Distributive
$= 8e + (-7)$	d. Subtraction
$= 8e - 7$	Definition of subtraction