Acad Algebra 1 Name KEY ID: 1

Chapter 2 Practice Test (circle final answers)

Date _____ Period ____

(1pt) Determine which numbers are integers. Circle the numbers that are integer.

1) $\sqrt{36}$ I

2) 11 I

3) $\frac{6}{12}$

4) $\sqrt{66}$

5) $-\sqrt{64}$ I

6) -4 I

(1pts) Name the number eitheir rational or irrational. Abbreviate: R=rational; IRR=irrational

7) $\sqrt{86}$ IRR

8) $-\sqrt{36}$ R

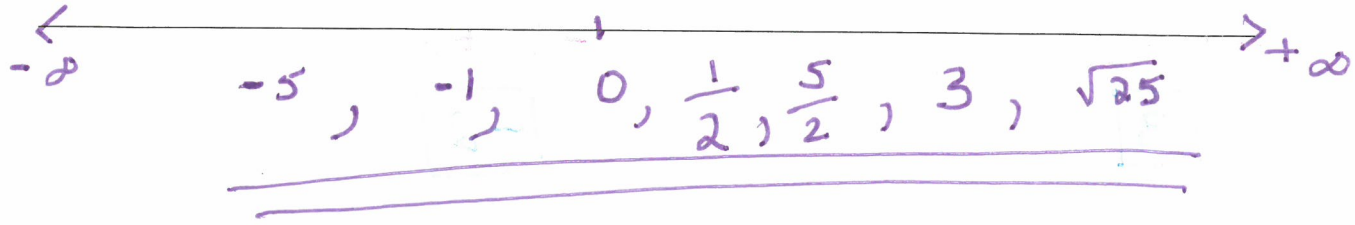
9) $\frac{0}{-2}$ R

10) $\sqrt{144}$ R

11) $-\sqrt{40}$ IRR

12) -2 R

13) (4pts) Arrange numbers 1/2, -1, 0, $\sqrt{25}$, -5 , 3, 5/2 in ascending order (least to greatest).



(8 pts) For the following expression, identify...

14) $-2x^2 + 3 + x^2 - 4x - 5 - x^3$

Terms $-2x^2, 3, x^2, -4x, -5, -x^3$

Like terms $3, -5$; $-2x^2, x^2$

Coefficients $-2, 1, -4, -1$

Constant terms $3, -5$

(3pts) Evaluate each expression. CLEARLY SHOW WORK AND CIRCLE ANSWER.

15) $|-4 - 6|$

$|(-4)+(-6)|$

$|-10|$

10

16) $|(-9) \div (-3)|$

$|3| =$

3

17) $|(-5)| \cdot (-6)$

$5 \cdot -6$

-30

18) $2 + |-3|$

$2+3$

5

(2pts) Find each sum. Show work! TIP: add negative numbers and add positive numbers

19) $8 + 4 + (-3) + (-6)$

$-9+12$

3

20) $6 + (-7) + (-3) + 2$

$-10+8$

-2

Rewrite each expression as an Addition problems (2pts). ← MUST DO
Then evaluate and circle your answer (1pts)

21) $7 - 1 - 2 - 6$

$7 + (-1) + 2 + 6$

$-1 + 15$

$\boxed{14}$

22) $-2 - 2 - 6 - 8$

$-2 + 2 + 6 + (-8)$

$-10 + 8$

$\boxed{-2}$

23) $5 - 7 - 4 - 4$

$5 + (-7) + 4 + 4$

$-7 + 13$

$\boxed{6}$

24) $7 - 6 - 1 - 8$

$7 + (-6) + (-1) + (-8)$

$-15 + 7$

$\boxed{-8}$

(2pts) Evaluate each expression

25) $(-2)(-2)(-1)(-4)$ ← EVEN # NEG's Result is A POSITIVE #

$\boxed{16}$

26) $(-3)(2)(-1)(-4)$ ← ODD # NEG's Result is a negative #

$\boxed{-24}$

(3pts) Find each quotient. Clearly show work.

27) $\frac{2}{9} \div \frac{-5}{3}$

Change ÷ to MULTIPLY

Take Reciprocal
- Keep sign
- FLIP FRACTION

$\frac{2}{9} \cdot \frac{3}{-5} =$

Reduce → $\frac{6}{-45} = \boxed{\frac{-2}{15}}$

28) $-8 \div \frac{2}{5}$

$\frac{-8}{1} \cdot \frac{5}{2} = \frac{-20}{1} \rightarrow \boxed{-20}$

29) $\frac{-3}{2} \div \frac{3}{10}$

$\frac{-3}{2} \cdot \frac{10}{3} = \frac{-10}{2} = \boxed{-5}$

↑ Reduce

30) $\frac{-1}{2} \div -8$

$-\frac{1}{2} \cdot \frac{1}{-8} = \boxed{\frac{1}{16}}$

(3pts) Evaluate each expression. Clearly show your steps.

31) $4 \div (3 - 4) - 3$

$4 \div (-1) + (-3)$

$-4 + (-3) =$

$\boxed{-7}$

32) $(10 - 2) \div (2 \cdot -2)$

$8 \div -4 =$

$\boxed{-2}$

33) $-3 \cdot (-3)^2 - 1$

$-3 \cdot 9 + (-1)$

$-27 + (-1) =$

$\boxed{-28}$

34) $(4)(-18 \div -6) - 3$

$(4) \cdot 3 + (-3)$

$12 + (-3) =$

$\boxed{9}$

35) $-6 - -3 - (5 - -4)$

$-6 + 3 - (9)$

$-15 + 3 =$

$\boxed{-12}$

36) $(-16 - -4) \div (1 - 5)$

$(-12) \div (-4) =$

$\boxed{3}$

37) $(-5 \cdot 2) \div 2(5 + -2 + 4 - -2)$

$(-10) \div 2 [5 + (-2) + 4 + 2]$

$-10 \div 2 \cdot (9)$

$-5 \cdot 9 =$

$\boxed{-45}$

38) $(-5 + 3)^2((-18 - 6) \div -6 - 3)$

$(-2)^2 \cdot [(-24) \div -6 + (-3)]$

$4 \cdot [4 + (-3)]$

$4 \cdot (1)$

$\boxed{4}$

(4pts) Simplify each expression. Write in standard form (variable term first and constant last)

39) $-(5x - 8)$ DISTRIBUTE (-1)

$-5x+8$

40) $-2(-x - 20)$ DISTRIBUTE (-2)

$2x+40$

41) $-3(x - 2)$

$-3x+6$

42) $1 + 9n + 1 - 4n$ ← COMBINE LIKE TERMS $9n-4n=5n$, $1+1=2$

$5N+2$

43) $9 - 10x + 9x - 12$ ← COMBINE LIKE TERMS

$-x-3$

44) $\frac{-10x + 25y - 15}{-5}$ ← DISTRIBUTE (-5)

$\frac{-10x}{-5} + \frac{25y}{-5} + \frac{-15}{-5}$

$2x-5y+3$

45) $\frac{-2x + 12y + 2}{2}$ ← DISTRIBUTE (2)

$\frac{-2x}{2} + \frac{12y}{2} + \frac{2}{2}$

$-x+6y+1$

46) $-1 - 3(-3x + 5)$ STEP 1: DISTRIBUTE

$-1+9x-15$ STEP 2: COMBINE LIKE TERMS

$9x-16$

47) $3(2 - 3x) - 1$

$6-9x+(-1)$

$-9x+5$

48) $-2 - (3x - 10) + 2x$

$-2-3x+10+2x$

$-x+8$

49) $-3(1 - 3x) - 2x - 6$

$-3+9x-2x-6$

$7x-9$

Evaluate each using the values given. Show the substitution (2pts) then evaluate (1pt).

50) $-z + x - y$; use $x = -3$, $y = 6$, and $z = -4$

$-(-4) + (-3) - (6)$

$+$

$-9 + 4 =$

$\boxed{-5}$

51) yz^2; use $y = -6$, and $z = 2$

$(-6)(2)^2$

$-6 \cdot 4 =$

$\boxed{-24}$

52) $z - (-2 + x)$; use $x = -5$, and $z = 6$

$(6) - [-2 + (-5)]$

$+$

$6 - [-7]$

$6 + 7 =$

$\boxed{13}$

53) $(r - p) \div 4$; use $p = -5$, and $r = 3$

$\div$

$+$

$[(3) - (-5)] \div 4$

$(3+5) \div 4$

$8 \div 4 =$

$\boxed{2}$