

Name Key

Review # 7

June 2018 Regents

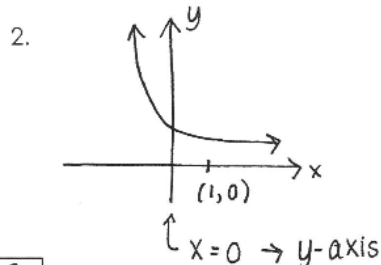
Due: Thurs. 6/5/19

Work must be shown for each question in order to receive credit.

1. $y_1 = x^2 + 4x - 1$
 $y_2 = x - 3$

x	-5	-1	1	-2
y_1	4	-4	4	-5
y_2	-8	-4	-2	-5

2 2



3. Num: $x^2(x+2) - 9(x+2)$
 $= (x+2)(x^2 - 9) = (x+2)(x+3)(x-3)$

Den: $x(x^2 - x - 6) = x(x-3)(x+2)$

Frac: $\frac{(x+2)(x+3)(x-3)}{x(x-3)(x+2)} = \frac{x+3}{x}$

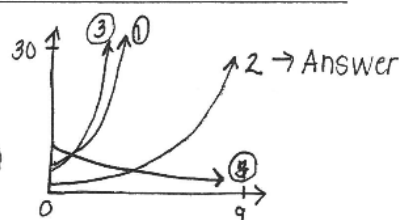
Or $\pi \rightarrow x$ compare values

3 2

4. window

$x: [0, 9]$

$y: [0, 30]$

Type each EQ into $y =$ 

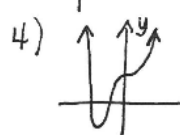
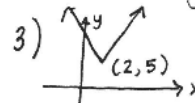
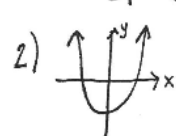
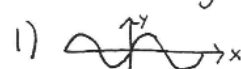
5. $(x+3i)^2 = (x+3i)(x+3i) = x^2 + 6xi + 9i^2$
 $= x^2 - 9 + 6xi$

$(2x-3i)^2 = (2x-3i)(2x-3i) = 4x^2 - 12xi + 9i^2$
 $= 4x^2 - 9 - 12xi$

$(x^2 + 6xi - 9) - (4x^2 - 9 - 12xi)$

$= -3x^2 + 18xi$

3 2

6. even $\rightarrow$ symmetrical wrt y-axis

7. $N(1) = 97.726$ $N(15) = 70.822$

$N(10) = 79.453$ $N(25) = 56.27$

$N(20) = 63.128$ $N(30) = 50.158$

Avg R of Ch = $\frac{\Delta y}{\Delta x}$

$[1, 10] \sim -2.03$ $[15, 25] \sim -1.46$

$[10, 20] \sim -1.63$ $[1, 30] \sim -1.64$

1 1

8. $\pi \rightarrow x$ expression: 21.71916032

1) 21.71916032

2) -15.97995152

3) -5.5722593

4) 42.00234563

25.

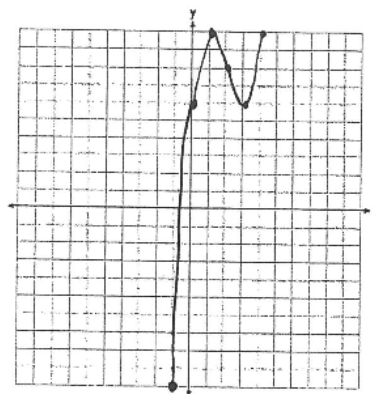
sr	Reality
fr	110
	103
	213

$$P(F|R) = \frac{103}{213}$$

No decimals. Exact answer

26.

x	y
-1	-10
0	6
1	10
2	8
3	6
4	10



27. $2x^2 + 5x + 8 = 0$
 $b^2 - 4ac = 25 - 4(2)(8) = -39$
 $\sqrt{-39} = i\sqrt{39}$
 $x = \frac{-5 \pm i\sqrt{39}}{4}$
 $\left\{ -\frac{5}{4} \pm \frac{\sqrt{39}}{4}i \right\}$

33. $\sqrt{6-2x} + x = 2x + 30 - 9$
 $(\sqrt{6-2x})^2 = (x+21)^2$
 $6-2x = x^2 + 42x + 441$
 $0 = x^2 + 44x + 435$
 $0 = (x+15)(x+29)$ $\{-15\}$
 $x = -15 \quad x = -29$

checks:

$$\sqrt{6-2(-15)} - 15 = 2(-15+15) - 9$$

$$6 - 15 = 0 - 9$$

$$-9 = -9$$

$$\sqrt{6-2(-29)} - 29 = 2(-29+15) - 9$$

$$8 - 29 = -28 - 9$$

$$-21 \neq -37$$

34. calculate: $23 - 18 = 5$

Use Results:

$$.030 \pm 2(1.548)$$

$$= .030 \pm 3.096$$

$$(-3.07, 3.13)$$

} must show work

Explain.

yes because Joseph's difference in means (5) is outside the 95% confidence interval.