Name Key Date 2013 Period 1 2 3 4 5 6

TOPIC 1 PRACTICE TEST

1. Evaluate $4x^2 + 2y^2 - y$ when x = 3 and y = -3

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

$4(9)+2(9)-(-3)$

$36+18+3$

$54+3$

57

2. Evaluate $-5x^3 \div \frac{1}{4}x - 2$ when x = 2

$-5(2)^3 \div \frac{1}{4}(2)-2$

$-5(8) \div \frac{1}{4}(2)-2$

$-40 \div \frac{1}{4}(2)-2$

$-40 \cdot \frac{4}{1}(2)-2$

$-160(2)-2$

$-320-2 = -322$

3. Solve for n: $-3(2-4n) - 1(n+5) = 2(1-2n)$

$-6+12n-n-5=2-4n$

$11n-11=2-4n$

$+4n \quad +11 \quad +11 \quad +4n$

$\frac{15n}{15} = \frac{13}{15}$

$n = \frac{13}{15}$

4. Solve for a: $\frac{1}{3}a + \frac{2}{5}a = 3$

$15\left(\frac{1}{3}a+\frac{2}{5}a=3\right)$

$\frac{15}{3}a+\frac{30}{5}a=45$

$5a+6a=45$

$\frac{11a}{11} = \frac{45}{11}$

$a = \frac{45}{11}$

5. Solve for x: $\frac{3}{8}x+\frac{4}{5}=\frac{3}{4}-\frac{1}{2}x$ (40)

$\frac{120}{8}x+\frac{160}{5}=\frac{120}{4}-\frac{40}{2}x$

$15x+32=30-20x$

$+20x \quad -32 \quad -32 \quad +20x$

$\frac{35x}{35} = \frac{-2}{35}$

$x = \frac{-2}{35}$

6. Solve for x: $\frac{3}{4}x - 6 = y$

$+6 \quad +6$

$\left(\frac{4}{3}\right)\frac{3}{4}x = y+6\left(\frac{4}{3}\right)$

$x = \frac{4}{3}y + \frac{24}{3}$

$x = \frac{4}{3}y + 8$

7. Solve for n: $5n + m^2n = 8$

$\frac{n(5+m^2)}{5+m^2} = \frac{8}{5+m^2}$

$n = \frac{8}{5+m^2}$

8. Solve for x: $3 - 2|x-1| = -7$

$-3 \quad -3$

$\frac{-2|x-1|}{-2} = \frac{-10}{-2}$

$|x-1| = 5$

$x-1=5 \quad x-1=-5$

$+1 \quad +1 \quad +1 \quad +1$

$x = 6 \quad x = -4$

9. Solve and graph: $5x - 4 < 3x + 8$

$-3x \quad +4 \quad -3x \quad +4$

$\frac{2x}{2} < \frac{12}{2}$

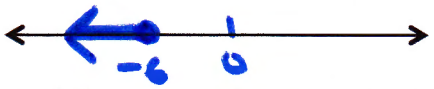
$x < 6$

10. Solve and graph: $-\frac{1}{2}x - 1 \geq 2$

$+1 \quad +1$

$(-2) -\frac{1}{2}x \geq 3\,(-2)$

$x \leq -6$

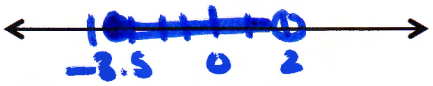


11. Solve and graph: $-3 \leq 2x + 4 < 8$

$-4 \quad -4 \quad -4$

$\frac{-7}{2} \leq \frac{2x}{2} < \frac{4}{2}$

$-3.5 \leq x < 2$



12. Solve and graph: $2(3x + 6) \leq 32 + 2x \leq -5x + 11$

$2(3x+6) \leq 32+2x$

$6x+12 \leq 32+2x$

$-2x \quad -12 \quad -12 \quad -2x$

$\frac{4x}{4} \leq \frac{20}{4}$

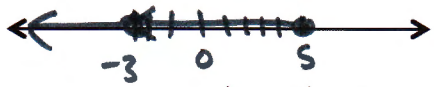
$x \leq 5$

$32+2x \leq -5x+11$

$-32 \quad +5x \quad +5x \quad -32$

$\frac{7x}{7} \leq \frac{-21}{7}$

$x \leq -3$



13. Solve for x: $|1 - 2x| > 7$

$1-2x > 7 \quad -1 \quad -1$

$\frac{-2x}{-2} > \frac{6}{-2}$

$x < -3$

$1-2x < -7 \quad -1 \quad -1$

$\frac{-2x}{-2} < \frac{-8}{-2}$

$x > 4$

14. Solve for x: $\frac{|2x-8|}{4} - 1 < 3$

$+1 \quad +1$

$4 \cdot \frac{|2x-8|}{4} < 4 \cdot 4$

$|2x-8| < 16$

$2x-8 < 16 \quad +8 \quad +8$

$\frac{2x}{2} < \frac{24}{2}$

$x < 12$

$2x-8 > -16 \quad +8 \quad +8$

$\frac{2x}{2} > \frac{-8}{2}$

$x > -4$

15. Solve for x: $|5x + 2| + 3x \leq 0$

$-3x \quad -3x$

$|5x+2| \leq -3x$

$5x+2 \leq -3x \quad -5x \quad -5x$

$\frac{2}{-8} \leq \frac{-8x}{-8}$

$-\frac{1}{4} \leq x$

$x \leq -\frac{1}{4}$

$5x+2 \geq 3x \quad -5x \quad -5x$

$\frac{2}{-2} \geq \frac{-2x}{-2}$

$-1 \leq x$

$x \geq -1$

16. Solve for x: $\left|\frac{2x+1}{5}\right| < 3$

$5 \cdot \frac{2x+1}{5} < 3 \cdot 5$

$2x+1 < 15 \quad -1 \quad -1$

$\frac{2x}{2} < \frac{14}{2}$

$x < 7$

$5 \cdot \frac{2x+1}{5} > -3 \cdot 5$

$2x+1 > -15 \quad -1 \quad -1$

$\frac{2x}{2} > \frac{-16}{2}$

$x > -8$