Name: Key Class: _____ Date: _____ ID: A

Test Review **SHOW YOUR WORK!!**

For Test ON 10-2-09

Multiple Choice

Identify the choice that best completes the statement or answers the question.

Solve the equation.

a 1. $\frac{3}{7}x + 5 = 8$

a. 7 b. $1\frac{2}{7}$ c. -7 d. $7\frac{2}{3}$

C 2. $11 = -d + 15$

a. 11 b. -4 c. 4 d. 6

C 3. $3(y + 6) = 30$

a. 5 b. 16 c. 4 d. -16

d 4. $\frac{5p}{7} - 18 = -43$

a. -31 b. $-85\frac{2}{5}$ c. -50 d. -35

C 5. $\frac{3x}{5} - 0.5 = 1.9$

a. 16 b. 0.16 c. 4 d. 2.3

d 6. $6(4.5y - 12) = 9$

a. 28 b. $3.\bar{3}$ c. $0.\bar{6}$ d. 3

A 7. $3p - 1 = 5(p - 1) - 2(7 - 2p)$

a. 3 b. 0 c. -9 d. -10

A 8. $5x - 5 = 3x - 9$

a. -2 b. 1 c. -1 d. -3

C 9. Find the value of y.

$-6y + 14 + 4y = 32$

a. 18 b. 1.8 c. -9 d. 9

(1) $\frac{3}{7}x + \frac{7}{5} = 8^{(7)}$

$3x + 35 = 56$

$-35 \quad -35$

$\frac{3x}{3} = \frac{21}{3}$

$x = 7$

(2) $11 = -d + 15$

$-15 \quad -15$

$-4 = -d$

$4 = d$

(3) $3(y+6) = 30$

$3y + 18 = 30$

$-18 \quad -18$

$\frac{3y}{3} = \frac{12}{3}$

$y = 4$

(4) $\frac{5p}{7} - 18 = -43$

$+18 \quad +18$

(7) $\frac{5}{7}p = -25^{(7)}$

$\frac{5p}{5} = \frac{-175}{5}$

$p = -35$

(5) $\frac{3x}{5} - .5 = 1.9$

$+.5 \quad +.5$

$(5)\frac{3x}{5} = 2.4^{(5)}$

$\frac{3x}{3} = \frac{12}{3}$

$x = 4$

(6) $6(4.5y - 12) = 9$

$27y - 72 = 9$

$+72 \quad +72$

$\frac{27y}{27} = \frac{81}{27}$

$y = 13$

(7) $3p - 1 = 5(p-1) - 2(7 - 2p)$

$3p - 1 = 5p - 5 - 14 + 4p$

$3p - 1 = 9p - 19$

$+19 \quad +19$

$3p + 18 = 9p$

$-3p \quad -3p$

$\frac{18}{6} = \frac{6p}{6}$

$p = 3$

(8) $5x - 5 = 3x - 9$

$-3x \quad -3x$

$2x - 5 = -9$

$+5 \quad +5$

$\frac{2x}{2} = \frac{-4}{2}$

$x = -2$

(9) $-6y + 14 + 4y = 32$

$-2y + 14 = 32$

$-14 \quad -14$

$\frac{-2y}{-2} = \frac{18}{-2}$

$y = -9$

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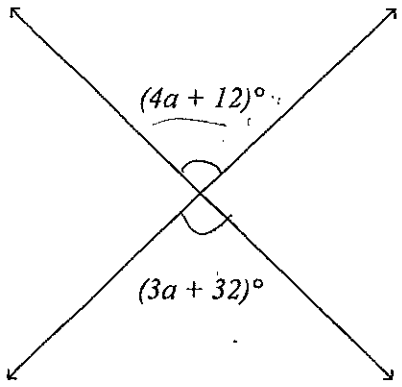
C 10. a. Find the value of a.
b. Find the value of the marked angles.



not drawn to scale

Vertical angles are congruent

$4a+12 = 3a+32$
$-3a \quad -3a$
$a+12 = 32$
$-12 \quad -12$
$a = 20$

substitute 20 in for a in $4a+12$
$4(20)+12 = 92°$

a. 22; 100° b. 19; 88° c. 20; 92° d. 24; 108°

Which number is a solution of the inequality?

d 11. $3x - 15 \geq 3$

a. $-\frac{9}{11}$ b. 5 c. $\frac{6}{11}$ d. 6

$3X - 15 \geq 3$
$+15 \quad +15$
$\frac{3X}{3} \geq \frac{18}{3}$
$X \geq 6$

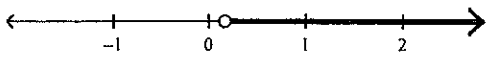
These answers have the inequalities left off

Solve the inequality. Then graph your solution.

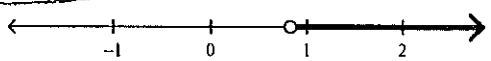
C 12. $q - \frac{1}{2} > \frac{1}{3}$

$(6)q - 6(\frac{1}{2}) > 6(\frac{1}{3})$
$6q - 3 > 2$
$+3 \quad +3$
$\frac{6q}{6} > \frac{5}{6}$
$q > \frac{5}{6}$

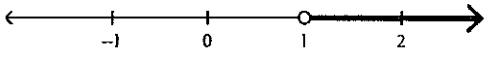
a. $q > \frac{1}{6}$



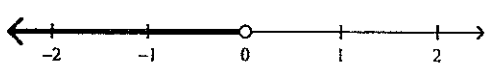
c. $q > \frac{5}{6}$



b. $q > 1$

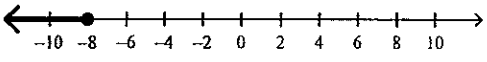


d. $q < \frac{0}{1}$

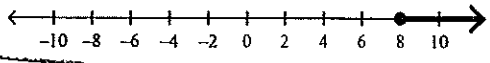


d 13. $-\frac{x}{4} \leq 2$

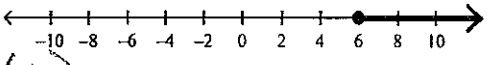
a. $x \leq -8$



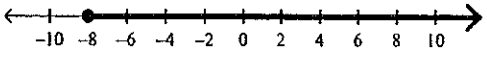
c. $x \geq 8$



b. $x \leq 6$



d. $x \geq -8$



$\frac{(-4)-X}{4} \leq 2(-4)$
$X \geq -8$

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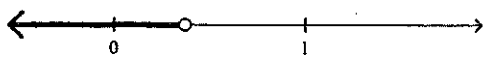
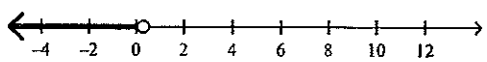
d 14. $\frac{4}{5}v < \frac{7}{15}$ $\quad 12v < 7$, $\frac{12v}{12} < \frac{7}{12}$, $v < \frac{7}{12}$

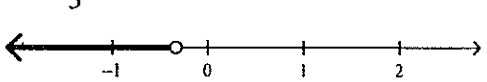
a. $v < \frac{28}{75}$



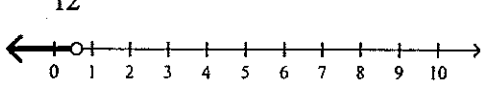
c. $v < \frac{3}{10}$



b. $v < -\frac{1}{3}$



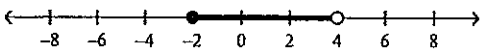
d. $v < \frac{7}{12}$



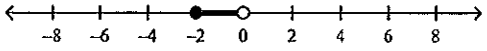
C 15. $-8 \le 2x - 4 < 4$ $\quad -8 \le 2x-4 < 4$, $+4 \quad +4 \quad +4$, $-4 \le 2x < 8$, $\frac{-4}{2} \le \frac{2x}{2} < \frac{8}{2}$, $-2 \le x < 4$

a. $0 \le x < 6$

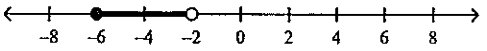
c. $-2 \le x < 4$



b. $-2 \le x < 0$

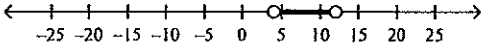


d. $-6 \le x < -2$

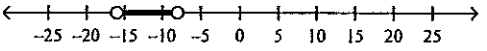


d 16. $-2 < 4x - 10 < 6$ $\quad -2 < 4x-10 < 6$, $+10 \quad +10 \quad +10$, $8 < 4x < 16$, $\frac{8}{4} < \frac{4x}{4} < \frac{16}{4}$, $2 < x < 4$

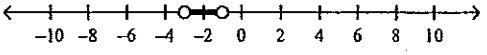
a. $4 < x < 12$



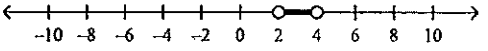
c. $-16 < x < -8$



b. $-3 < x < -1$



d. $2 < x < 4$



Solve the inequality.

C 17. $\frac{3}{10} \ge k - \frac{3}{5}$ $\quad 3 \ge 10k - 6$, $+6 \quad +6$, $9 \ge 10k$, $\frac{9}{10} \ge \frac{10k}{10}$, $\frac{9}{10} \ge k$

a. $k \ge \frac{9}{10}$ $\quad$ b. $k \le \frac{2}{5}$ $\quad$ c. $k \le \frac{9}{10}$ $\quad$ d. $k \le \frac{3}{10}$

A 18. $\frac{1}{3} + x + \frac{2}{9} \ge \frac{5}{6}$ $\quad \frac{1}{3} + x + \frac{2}{9} \ge \frac{5}{6}$, $6 + 18x + 4 \ge 15$, $10 + 18x \ge 15$, $-10 \quad -10$, $18x \ge 5$, $\frac{18x}{18} \ge \frac{5}{18}$, $x \ge \frac{5}{18}$

a. $x \ge \frac{5}{18}$ $\quad$ b. $x \le \frac{17}{18}$ $\quad$ c. $x \ge \frac{17}{18}$ $\quad$ d. $x \ge 1\frac{7}{18}$

A 19. $-\frac{3}{10}x - 7 \le \frac{1}{2}$ $\quad -3x - 70 < 5$, $+70 \quad +70$, $-3x < 75$, $\frac{-3x}{-3} < \frac{75}{-3}$, $x > 25$

a. $x > -25$ $\quad$ b. $x < 2\frac{1}{4}$ $\quad$ c. $x < 7\frac{4}{5}$ $\quad$ d. $x < 7\frac{1}{2}$

A 20. $-5x - 7 < 28$ $\quad -5x - 7 < 28$, $+7 \quad +7$, $-5x < 35$, $\frac{-5x}{-5} > \frac{35}{-5}$, $x > -7$

a. $x > -7$ $\quad$ b. $x < -7$ $\quad$ c. $x > \frac{21}{5}$ $\quad$ d. $x < -\frac{21}{5}$

a 21. $a + 8 - 2(a - 12) > 0$ $\quad a + 8 - 2(a-12) > 0$, $a + 8 - 2a + 24 > 0$, $-a + 32 > 0$, $+a \quad +a$, $32 > a$

a. $a < 32$ $\quad$ b. $a > -16$ $\quad$ c. $a < -16$ $\quad$ d. $a > 32$

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C 22. $12 + 10w \geq 8(w + 12)$

a. $w \geq -42$ b. $w \geq 48$ (c.) $w \geq 42$ d. $w \geq 54$

B 23. $12x - 3x + 11 > 4x - (17 - 9x)$

a. $x > -7$ (b. $x < 7$) c. $x < -\frac{14}{11}$ d. $x > -\frac{14}{11}$

C 24. $\frac{1}{5} + \frac{1}{3}x > \frac{1}{2}x - \frac{1}{4}$

a. $\frac{27}{10} < x$ b. $x < \frac{2}{9}$ (c. $x < \frac{27}{10}$) d. $x < \frac{3}{40}$

d 25. $11d - 9 \leq 15d + 3$

a. $d \geq \frac{6}{13}$ b. $d \geq \frac{3}{13}$ c. $d \geq -1\frac{1}{2}$ (d. $d \geq -3$)

Answer choices are messed up

(22) $12 + 10w \geq 8w + 96$

$-8w \quad -8w$

$12 + 2w \geq 96$

$-12 \quad -12$

$\frac{2w}{2} \geq \frac{84}{2}$

$w \geq 42$

(23) $12x - 3x + 11 > 4x - 17 + 9x$

$9x + 11 > 13x - 17$

$-9x \quad -9x$

$11 > 4x - 17$

$+17 \quad +17$

$\frac{28}{4} > \frac{4x}{4}$

$7 > x$

(24) $(60)\frac{1}{5} + (60)\frac{1}{3}x > (60)\frac{1}{2}x - \frac{1}{4}(60)$

$12 + 20x > 30x - 15$

$-20x \quad -20x$

$12 > 10x - 15$

$+15 \quad +15$

$\frac{27}{10} > \frac{10x}{10}$

$\frac{27}{10} > x$

(25) $11d - 9 \leq 15d + 3$

$-11d \quad -11d$

$-9 \leq 4d + 3$

$-3 \quad -3$

$\frac{-12}{4} \leq \frac{4d}{4}$

$-3 \leq d$