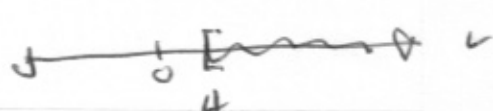
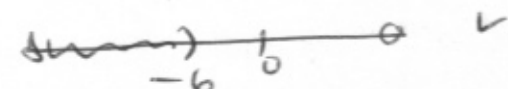
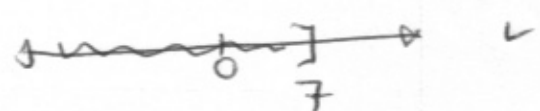
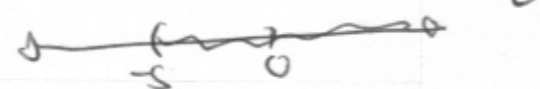
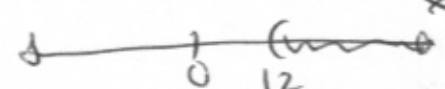
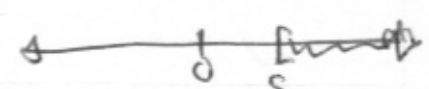
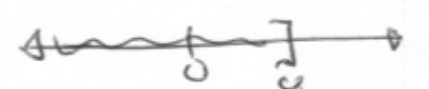



1	-17	✓	15	4	✓
2	32	✓	16	-17/2	✓
3	-5	✓	17	3/2	✓
4	-2	✓	18	5/3	✓
5	3/5	✓	19	6/5	✓
6	13/15	✓	20	-25/13	✓
7	1	✓	21		✓
8	3/4	✓	22		✓
9	13/35	✓	23		✓
10	1/24	✓	24		✓
11	-2x - 10	✓	25		x > 12 ✓
12	2x - 22	✓	26		x ≥ 5 ✓
13	-4/3	✓	27		x ≤ 8 ✓
14	12	✓	28		x < 7 ✓

34 ✓

East Los Angeles College

Department of Mathematics

Math 115

Test 1

Use order of Operation to evaluate the following.

1. $-(-3)^2 + 2(6-10)$

2. $|-8-12| + 3|-4|$

3. $7 - (-8) + 4(-5)$

4. $(-5)^2 - 3^3$

Simplify the following fractions.

5. $\frac{12}{20}$

6. $\frac{39}{45}$

Multiply or Divide the following fractions.

7. $-\frac{6}{5} \cdot \left(-\frac{15}{18}\right)$

8. $\frac{5}{7} \div \frac{20}{21}$

Add the following fractions.

9. $\frac{4}{5} - \frac{3}{7}$

10. $-\frac{1}{8} + \frac{1}{6}$

Simplify the following expressions

11. $3x - 5(x+2)$

12. $-4(x+1) + 6(x-3)$

Solve the following equations.

13. $3x - 5 = -9$

14. $2x - 8 = x + 4$

15. $2(x+5) - 6 = 12$

16. $3(x-4) = 5(x+1)$

$$17. \frac{x}{7} = \frac{3}{14}$$

$$18. \frac{2}{x} = \frac{6}{5}$$

$$19. \frac{4}{3}x = \frac{8}{5}$$

$$20. \frac{2}{5}x = -\frac{10}{3}$$

Graph the following inequalities.

$$21. x \geq 4$$

$$22. x < -6$$

$$23. x \leq 7$$

$$24. x > -5$$

25. Numbers more than 12

26. Numbers at least 5

27. Numbers no more than 8

28. Numbers less than 7

(1)

$$-(-3)^2 + 2(6-10)$$

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

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

$$-9 + (-8)$$

$$\boxed{-17}$$

(2) $|-8-12| + 3|-4|$

$$|-20| + 3|-4|$$

$$20 + 3 \cdot 4$$

$$20 + 12$$

$$\boxed{32}$$

(3) $7 - (-8) + 4(-5)$

$$7 + 8 + 4(-5)$$

$$7 + 8 + (-20)$$

$$15 + (-20)$$

$$\boxed{-5}$$

(4) $(-5)^2 - 3^3$

$$25 - 27$$

$$\boxed{-2}$$

(5) $\frac{12}{20} = \frac{\cancel{2} \cdot \cancel{2} \cdot 3}{\cancel{2} \cdot \cancel{2} \cdot 5}$

$$= \boxed{\frac{3}{5}}$$

(6) $\frac{39}{45} = \frac{\cancel{3} \cdot 13}{\cancel{3} \cdot 3 \cdot 5}$

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

(7) $-\frac{6}{5} \cdot \left(-\frac{15}{18}\right)$

$$\frac{6}{5} \cdot \frac{15}{18}$$

$$\frac{\cancel{6} \cdot 15}{5 \cdot \cancel{18}}$$

$$\frac{\cancel{7} \cdot \cancel{7} \cdot \cancel{8} \cdot 8}{15 \cdot \cancel{3} \cdot \cancel{6} \cdot \cancel{2}}$$

$$\boxed{1}$$

$$(8) \quad \frac{5}{7} \div \frac{20}{21}$$

$$\frac{5}{7} \cdot \frac{21}{20}$$

$$\frac{\cancel{5} \cdot \cancel{3} \cdot \cancel{7}}{\cancel{7} \cdot 2 \cdot \cancel{2}}$$

$$\frac{3}{4}$$

$$(9) \quad \frac{4}{5} - \frac{3}{7}$$

$$\frac{4 \cdot 7}{5 \cdot 7} - \frac{3 \cdot 5}{7 \cdot 5}$$
$$\frac{28}{35} - \frac{15}{35}$$

$$\frac{13}{35}$$

$$(10) \quad -\frac{1}{8} + \frac{1}{6}$$

$$-\frac{1 \cdot 3}{8 \cdot 3} + \frac{1 \cdot 4}{6 \cdot 4}$$
$$-\frac{3}{24} + \frac{4}{24}$$
$$\frac{-3+4}{24}$$

$$\frac{1}{24}$$

$$(11) \quad 3x - 5(x+2)$$

$$3x - 5x - 10$$

$$-2x - 10$$

$$(12) \quad -4(x+1) + 6(x-3)$$

$$-4x - 4 + 6x - 18$$

$$2x - 22$$

$$(13) \quad \begin{array}{r} 3x - 5 = -9 \\ +5 \quad +5 \end{array}$$

$$\frac{3x}{3} = \frac{-4}{3}$$

$$x = -\frac{4}{3}$$

$$(14) \quad \begin{array}{r} 2x - 8 = x + 4 \\ -x \quad -x \end{array}$$

$$\frac{x-8}{+8 \quad +8} = 4$$

$$x = 12$$

$$(15) \quad 2(x+5) - 6 = 12$$

$$2x + 10 - 6 = 12$$

$$2x + 4 = 12$$
$$\quad -4 \quad -4$$

$$\frac{2x}{2} = \frac{8}{2}$$

$$x = 4$$

$$(16) \quad 3(x-4) = 6(x+1)$$

$$3x - 12 = 6x + 6$$
$$-6x \quad -6x$$

$$-2x - 12 = 6$$
$$\quad +12 \quad +12$$

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

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

$$(17) \quad \frac{x}{7} = \frac{3}{14}$$

$$14x = 21$$

$$\frac{14x}{14} = \frac{21}{14}$$

$$x = \frac{21}{14}$$

$$x = \frac{3 \cdot 7}{2 \cdot 7}$$

$$x = \frac{3}{2}$$

$$(18) \quad \frac{2}{x} = \frac{6}{5}$$

$$10 = 6x$$

$$\frac{10}{6} = \frac{6x}{6}$$

$$\frac{10}{6} = x$$

$$\frac{5}{3} = x$$

$$x = \frac{5}{3}$$

$$(19) \quad \frac{4}{3}x = \frac{8}{5}$$

$$\frac{3}{4} \cdot \frac{4}{3}x = \frac{8}{5} \cdot \frac{3}{4}$$

$$x = \frac{8 \cdot 3}{5 \cdot 4}$$

$$x = \frac{\cancel{2} \cdot \cancel{2} \cdot (2 \cdot 3)}{(5 \cdot \cancel{2} \cdot \cancel{2})}$$

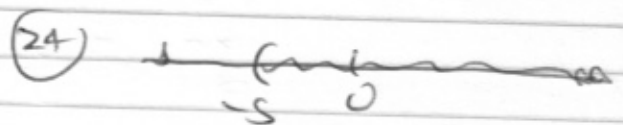
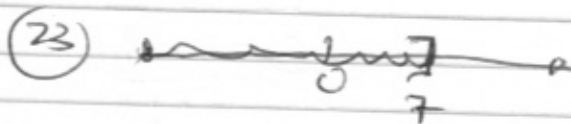
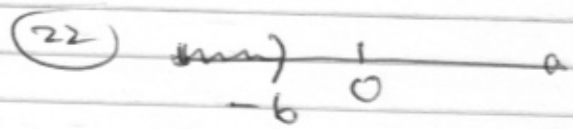
$$x = \frac{6}{5}$$

$$(20) \quad \frac{3}{7} \cdot \frac{2}{5}x = -\frac{10}{3} \cdot \frac{5}{2}$$

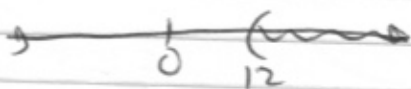
$$x = -\frac{10 \cdot 5}{3 \cdot 2}$$

$$x = -\frac{\cancel{2} \cdot 5 \cdot 5}{3 \cdot \cancel{2}}$$

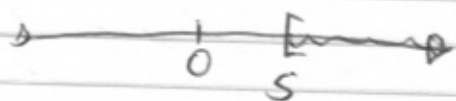
$$x = -\frac{25}{3}$$



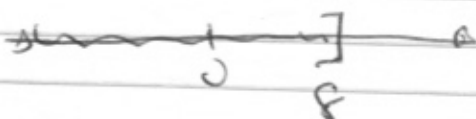
(25) $x > 12$



(26) $x \geq 5$



(27) $x \leq 8$



(29) $x < 7$

