

Answer Sheet

1	5	✓	16	$-\frac{1}{24}$	—
2	32	✓	17	28 /5	—
3	-25	✓	18	$-13/4$	—
4	-27	✓	19	$x = -2$	—
5	19	✓	20	$x = 2$	—
6	-4	✓	21	$x = 10$	—
7	$\frac{5}{6}$	✓	22	$x = -16$	—
8	$\frac{3}{5}$	✓	23	$x = 7/6$	—
9	1	✓	24	$x = 3/4$	—
10	$\frac{1}{32}$	✓	25	$x = 2$	—
11	4	✓	26	$x = 5/2$	—
12	6	✓	27	$x = 22/3$	—
13	$7/x$	✓	28	$x = -4$	—
14	$-5/y$	✓	29	Solutions	
15	$\frac{1}{2}$	✓	30		

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East Los Angeles College

Department of Mathematics

Math 115

Test 1

Use order of Operation to evaluate the following.

1. $5^2 - 2^3 + 4(-3)$

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

3. $(6 - 5 \cdot 3) + 2(-1 - 7)$

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

5. $|-6 \cdot 2 + 5| + |4 + 8|$

6. $(-3)^2 + (-1)^3 - |-5 - 8|$

Simplify the following fractions.

7. $\frac{15}{18}$

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

Multiply or Divide the following fractions.

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

10. $\frac{1}{4} \div 8$

11. $6 \cdot \frac{2}{3}$

12. $\frac{4}{5} \div \frac{2}{15}$

Add the following fractions.

13. $\frac{5}{x} + \frac{2}{x}$

14. $\frac{3}{y} - \frac{8}{y}$

15. $\frac{2}{7} + \frac{3}{14}$

16. $\frac{3}{8} - \frac{5}{12}$

17. $4 + \frac{2}{5}$

18. $-3 - \frac{1}{4}$

Solve the following equations.

19. $3x - 5 = -11$

20. $-x + 6 = 4$

21. $2(x - 5) - 1 = 9$

22. $\frac{3}{4}x = -12$

23. $-6x + 3 = -4$

24. $5x = \frac{15}{4}$

25. $4x - 2x + 8 = 12$

26. $6x - 3 = 2x + 7$

27. $5(x - 4) = 2(x + 1)$

28. $2(x + 4) - 3x = 12$

29. What is your name?

$$(25) \quad 4x - 2x + 8 = 12$$

$$\begin{array}{r} 2x + 8 = 12 \\ -8 \quad -8 \end{array}$$

$$\begin{array}{r} 2x = 4 \\ \hline 2 \quad 2 \end{array}$$

$$x = 2$$

$$\frac{3x}{3} = \frac{22}{3}$$

$$x = \frac{22}{3}$$

$$(28) \quad 2(x+4) - 3x = 12$$

$$2x + 8 - 3x = 12$$

$$\begin{array}{r} -x + 8 = 12 \\ -8 \quad -8 \end{array}$$

$$-x = 4$$

$$\begin{array}{r} -1 \cdot x = 4 \\ \hline -1 \quad -1 \end{array}$$

$$x = -4$$

$$(26) \quad \begin{array}{r} 6x - 3 = 2x + 7 \\ -2x \quad -2x \end{array}$$

$$\begin{array}{r} 4x - 3 = 7 \\ +3 \quad +3 \end{array}$$

$$\begin{array}{r} 4x = 10 \\ \hline 4 \quad 4 \end{array}$$

$$x = \frac{2.5}{2.2}$$

$$x = 5/2$$

$$(27) \quad 5(x-4) = 2(x+1)$$

$$\begin{array}{r} 5x - 20 = 2x + 2 \\ -2x \quad -2x \end{array}$$

$$\begin{array}{r} 3x - 20 = 2 \\ +20 \quad +20 \end{array}$$

$$3x = 22$$

$$\textcircled{20} \quad \begin{array}{r} -x + 6 = 4 \\ -6 \quad -6 \end{array}$$

$$-x = -2$$

$$\begin{array}{r} -1 \cdot x = -2 \\ \hline -1 \quad -1 \end{array}$$

$$\boxed{x = 2}$$

$$\textcircled{23} \quad \begin{array}{r} -6x + 3 = -4 \\ -3 \quad -3 \end{array}$$

$$\begin{array}{r} -\cancel{6}x = -7 \\ \hline -\cancel{6} \quad -6 \end{array}$$

$$\boxed{x = \frac{7}{6}}$$

$$\textcircled{21} \quad 2(x-5) - 1 = 9$$

$$2x - 10 - 1 = 9$$

$$\begin{array}{r} 2x - 11 = 9 \\ +11 \quad +11 \end{array}$$

$$\begin{array}{r} 2x = 20 \\ \hline 2 \quad 2 \end{array}$$

$$\boxed{x = 10}$$

$$\textcircled{22} \quad \frac{3}{4}x = -12$$

$$\frac{\cancel{4}}{3} \cdot \frac{\cancel{3}}{4}x = \frac{4}{3}(-12)$$

$$x = -4 \cdot \frac{12}{3}$$

$$x = -\frac{4\cancel{6}}{3} \quad \boxed{x = -16}$$

$$\textcircled{24} \quad \frac{\cancel{5}x}{5} = \frac{15}{\cancel{5} \cdot 4}$$

$$x = \frac{15}{4} \div 5$$

$$x = \frac{15}{4} \cdot \frac{1}{5}$$

$$x = \frac{15}{4 \cdot 5}$$

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

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

$$(15) \quad \frac{2}{7} + \frac{3}{14}$$

$$\frac{2 \cancel{14}}{7 \cancel{14}} + \frac{3 \cancel{14}}{14 \cancel{14}}$$

$$\frac{4}{14} + \frac{3}{14}$$

$$\frac{4+3}{14}$$

$$\frac{7}{14} \quad \frac{\cancel{7}}{\cancel{2} \cdot \cancel{7}} \quad \boxed{\frac{1}{2}}$$

$$(16) \quad \frac{3}{8} - \frac{5}{12}$$

$$\frac{3 \cancel{24}}{8 \cancel{24}} - \frac{5 \cancel{24}}{12 \cancel{24}}$$

$$\frac{9}{24} - \frac{10}{24}$$

$$\frac{9-10}{24}$$

$$\boxed{-\frac{1}{24}}$$

$$(17) \quad \frac{4}{1} + \frac{2}{5}$$

$$\frac{4 \cancel{5}}{1 \cancel{5}} + \frac{2 \cancel{5}}{5 \cancel{5}}$$

$$\frac{20}{5} + \frac{8}{5}$$

$$\boxed{\frac{28}{5}} \quad \frac{7 \cdot 2 \cdot 2}{5}$$

$$(18) \quad -\frac{3}{1} - \frac{1}{4}$$

$$-\frac{3}{1} - \frac{1}{4}$$

$$-\frac{3 \cancel{4}}{1 \cancel{4}} - \frac{1 \cancel{4}}{4 \cancel{4}}$$

$$-\frac{12}{4} - \frac{1}{4} \quad \boxed{-\frac{13}{4}}$$

$$(19) \quad \begin{array}{rcl} 3x - 5 & = & -11 \\ +5 & +5 & \end{array}$$

$$\frac{3x}{3} = \frac{-6}{3}$$

$$\boxed{x = -2}$$

$$(8) \quad \frac{12}{20}$$

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

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

$$(12) \quad \frac{4}{5} \cdot \frac{2}{15}$$

$$\frac{4}{5} \cdot \frac{15}{2}$$

$$\frac{4 \cdot 15}{5 \cdot 2}$$

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

$$\frac{6}{1}$$

$$\boxed{6}$$

$$(9) \quad -\frac{6}{5} \cdot \left(-\frac{15}{18}\right)$$

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

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

$$(1)$$

$$(13) \quad \frac{5}{x} + \frac{2}{x}$$

$$\frac{5+2}{x}$$

$$\boxed{\frac{7}{x}}$$

$$(10) \quad \frac{1}{4} \cdot \frac{1}{8}$$

$$\frac{1}{4} \cdot \frac{1}{8}$$

$$\boxed{\frac{1}{32}}$$

$$(14) \quad \frac{3}{y} - \frac{8}{y}$$

$$\frac{3-8}{y} \quad \boxed{\frac{-5}{y}}$$

$$\frac{-5}{y}$$

$$(11) \quad 6 \cdot \frac{2}{3}$$

$$\frac{6 \cdot 2}{3}$$

$$\frac{12}{3} \quad \boxed{4}$$

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$$(1) \quad 5^2 - 2^3 + 4(-3) \quad (4) \quad 5(-3) + 3(-4)$$

$$25 - 8 + 4(-3)$$

$$-15 + (-12)$$

$$25 - 8 + (-12)$$

$$\boxed{-27}$$

$$17 + (-12)$$

$$(5) \quad |-6 \cdot 2 + 5| + |4 + 8|$$

$$\boxed{5}$$

$$|-12 + 5| + |4 + 8|$$

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

$$|-7| + |12|$$

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

$$7 + 12$$

$$20 + 3 \cdot 4$$

$$\boxed{19}$$

$$20 + 12$$

$$(6) \quad (-3)^2 + (-1)^3 - |-5 - 8|$$

$$\boxed{32}$$

$$9 + (-1) - |-12|$$

$$(3) \quad (6 - 5 \cdot 3) + 2(-1 - 7)$$

$$9 + (-1) - 12$$

$$(6 - 15) + 2(-1 - 7)$$

$$8 - 12$$

$$(-9) + 2(-1 - 7)$$

$$\boxed{-4}$$

$$(-9) + 2(-8)$$

$$(7)$$

$$\frac{15}{18}$$

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

$$(-9) + (-16)$$

$$\boxed{-25}$$

$$\boxed{\frac{5}{6}}$$