

MAT 0012C

Name: _____

Chapters 1 &
2.1 to 2.5

Date: SOLUTIONS

Practice for the test Section: _____

For this exam you will not be allowed to use a calculator.

1. Add: $967 + 7560 + 92 + 20642$

29,261

2. Add: $569 + 76 + 32,960 + 54$

33,659

3. Add: $4598 + 34000 + 43$

38,641

4. Subtract 8924 from 9172

248

5. $78,943 - 45,685$

33,258

6. Subtract 6596 from 9975

3,379

7. Multiply: 482×23

11,086

8. Multiply: 4578×153

700,434

9. Multiply: 386×73

28,178

10. Find the quotient and remainder of 68130 divided by 21

3244 R 6

11. Find the quotient and remainder of 3285 divided by 32

102 R 21

12. Find the quotient and remainder of 38,951 divided by 163

238 R 157

13. Evaluate each of the following expressions:

a) $(9-2)^2 = (7)^2 = 49$

b) $0/9 = 0$

c) $7/0 = \text{undefined}$

d) $|-3| = 3$

e) opposite of $-87 = 87$

f) $1^{172} = 1$

$$g) \text{ opposite of } 43 = \boxed{-43}$$

$$h) 0/0 = \boxed{\text{undefined}}$$

$$i) -12/0 = \boxed{\text{undefined}}$$

$$j) |-4 - 5| = |-9| = \boxed{9}$$

$$k) (-1)^5 = \boxed{-1}$$

$$l) -(4-6)^3 = -(-2)^3 = -(-8) = \boxed{8}$$

$$m) 1 - (-2) + 7 - (+4) = 10 - 4 = \boxed{6}$$
$$1 + 2 + 7 - 4$$

$$n) 4 - 2(3-5)^3 + 4(3-2) = 4 + 16 + 20 = \boxed{40}$$
$$4 - 2(-2)^3 + 4(1)$$
$$4 - 2(-8) + 20$$

$$o) -7 + 5 = \boxed{-2}$$

$$p) -6 - 8 + 3 = -14 + 3 = \boxed{-11}$$

$$q) 12 - (-5) = 12 + 5 = \boxed{17}$$

$$r) 6 + (-4) - (+3) = 6 - 4 - 3 = 6 - 7 = \boxed{-1}$$

$$s) -5 - (-8) = -5 + 8 = \boxed{3}$$

$$t) (-2)^4 = (-2)(-2)(-2)(-2) = \boxed{16}$$

$$u) -2^4 = -(2)(2)(2)(2) = \boxed{-16}$$

$$v) -(4-7)^3 = -(-3)^3 = -(-27) = \boxed{27}$$

14. List the order of operations for real numbers. Be specific! (PEMDAS)

1. parentheses
2. exponents
3. multiplication & division (L to R)
4. add & subtract (L to R)

15. Evaluate each of the following expressions:

a) $9 - 4/2 + 3$

$$9 - 2 + 3$$

$$12 - 2 = \boxed{10}$$

b) $(5)^2 - 8 + 6^2 - 3$

$$25 - 8 + 36 - 3$$

$$61 - 11 = \boxed{50}$$

c) $4 - 3(4+1) + 2^4 + (6-5)^3 + 1^{26}$

$$4 - 3(5) + 2^4 + (1)^3 + 1^{26}$$

$$4 - 3(5) + 16 + 1 + 1$$

$$4 - 15 + 16 + 1 + 1$$

$$22 - 15$$

$$\boxed{7}$$

d) $2(7-6)^3 + 3(1-2)^4 + 15 - 2^2 + 29$

$$2(1)^3 + 3(-1)^4 + 15 - 2^2 + 29$$

$$2(1) + 3(1) + 15 - 4 + 29$$

$$2 + 3 + 15 - 4 + 29$$

$$49 - 4$$

$$\boxed{45}$$

e) $4 - 6(3-5) - (-4) - (-3)^3$

$$4 - 6(-2) - (-4) - (-3)^3$$

$$4 - 6(-2) - (-4) - (-27)$$

$$4 + 12 + 4 + 27$$

$$\boxed{47}$$

$$f) 6 - (9 - 5)^2 + 3(2 - 7)^2 - 7 - (+6)$$

$$6 - (4)^2 + 3(-5)^2 - 7 - (+6)$$

$$6 - 16 + 3(25) - 7 - 6$$

$$6 - 16 + 75 - 7 - 6$$

$$81 - 29$$

52

16. The Long family purchased a boat for \$25,000. After making several improvements at a total cost of \$5,500, they sold the boat for \$50,000. How much profit did they make?

cost:	$\begin{array}{r} 25,000 \\ + 5,500 \\ \hline 30,500 \end{array}$	$\begin{array}{r} 50,000 \\ - 30,500 \\ \hline \$19,500 \end{array}$	$\begin{array}{r} \text{selling price} \\ \text{cost} \\ \hline \text{profit} \end{array}$
-------	---	--	--

17. Marcia had \$59 in her bank account. She withdrew \$43. She then deposited \$140. The next day, she withdrew another \$62. What is Marcia's new bank account balance?

$$59 - 43 + 140 - 62$$

$$199 - 105$$

\$94

18. John purchased 15 notebooks at \$11 each and 8 mechanical pencils at \$4 each. What is his total purchase price?

$$15(\$11) + 8(\$4)$$

$$165 + 32$$

\$197