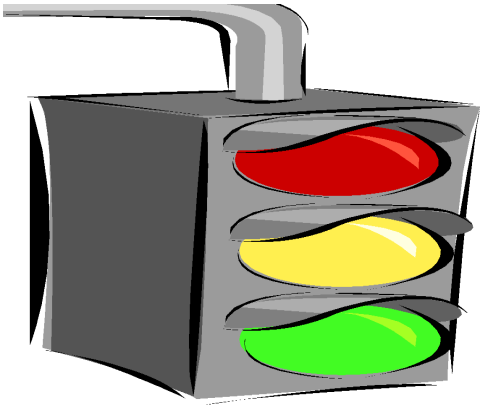

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SHOW WORK

Questions :

3,4,5,8,10,15, 16, 19

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3. Evaluate.

a) $3^2 + 1$

$= 9 + 1$

$= 10$

c) $(3 + 1)^2$

$= (4)^2$

$= 16$

e) $2^2 + 4$

$= 4 + 4$

$= 8$

f) $2^2 - 4$

$4 - 4$

$= 0$

h) $(2 - 4)^2$

$= (-2)^2$

$= 4$

j) $2^2 - 4^2$

$= 4 - 16$

$= -12$

4. Evaluate. Check using a calculator.

a) $2^3 \times 5$

$= 8 \times 5$

$= 40$

c) $(2 \times 5)^3$

$= (10)^3$

$= 1000$

e) $(-10)^3 \div 5$

$= -1000 \div 5$

$= -200$

d) $(2 \times 5)^2$

$= (10)^2$

$= 100$

f) $(-10) \div 5^0$

$-10 \div 1$

$= -10$

g) $[(-10) \div 5]^3$

$= (-2)^3$

$= -8$

h) $[(-10) \div 5]^0$

$= 1$

5. Evaluate.

b) $(2 - 3)^3$

d) $(2 + 3)^3$

e) $2^3 \div (-1)^3$

f) $(2 \div 2)^3$

g) $2^3 \times (-2)^3$

h) $(2 \times 1)^3$

You do out first

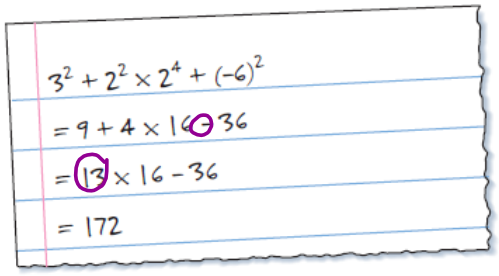
$3^2 + 2^2 \times 2^4 + (-6)^2$

$9 + 4 \times 16 + 36$

$9 + 64 + 36$

$= 109$

7. Identify, then correct, any errors in the student work below. Explain how you think the errors occurred.



8. Use BEDMAS to evaluate. SHOW ALL WORK

a) $(7)(4) - (5)^2$

$= 28 - 25$

$= 3$

b) $6(2 - 5)^2$

$= 6(-3)^2$

$= 6(9)$

$= 54$

c) $(-3)^2 + (4)(7)$

$= 9 + 28$

$= 37$

d) $(-6) + 4^0 \times (-2)$

$= (-6) + 1 \times (-2)$

$= (-6) + (-2)$

$= -8$

e) $(2^2 \times 1^3)^2$

$= (4 \times 1)^2$

$= (4)^2$

$= 16$

f) $[18 \div (-6)]^3 \times 2$

$= [-3]^3 \times 2$

$= -27 \times 2$

$= -54$

10. Evaluate.

a) $(3+4)^2 \times (4-6)^3$

$= (7)^2 \times (-2)^3$

$= 49 \times -8$

$= -392$

b) $(8 \div 2^2 + 1)^3 - 3^5$

$= (8 \div 4 + 1)^3 - 3^5$

$= (2+1)^3 - 3^5$

$= (3)^3 - 3^5$

$= 27 - 243$

$= -216$

c) $4^3 \div [8(6^0 - 2^1)]$

$= 64 \div [8(1-2)]$

$= 64 \div [8(-1)]$

$= 64 \div -8$

$= -8$

d) $9^2 \div [9 \div (-3)]^2$

$= 9^2 \div [-3]^2$

$= 81 \div 9$

$= 9$

e) $(2^2 \times 1^3)^2$

$= (4 \times 1)^2$

$= 4^2$

$= 16$

f) $(11^3 + 5^2)^0 + (4^2 - 2^4)$

$= (1) + (16-16)$

$= 1 + 0$

$= 1$

15. This student got the correct answer, but she did not earn full marks. Find the mistake this student made. Explain how it is possible she got the correct answer. Write a more efficient solution for this problem.

$-(24-3\times4^2)^0\div(-2)^3$

$=-(24-12^2)^0\div(-8)$

$=-(24-144)^0\div(-8)$

$=-(-120)^0\div(-8)$

$=-1\div(-8)$

$=\frac{1}{8}$

$-(24-3\times4^2)^0\div(-2)^3$

$=-(1)\div(-8)$

$=\frac{-1}{-8}$

$=\frac{1}{8}$

16. USE BEDMAS to evaluate. SHOW ALL WORK

a) $(14 + 10)^2 \times (21 - 28)^3$

$= (24)^2 \times (-7)^3$

$= 576 \times (-343)$

$= 197\,568$

b) $(36 \div 2^2 + 11)^3 - 10^5$

$(36 \div 4 + 11)^3 - 10^5$

$(9 + 11)^3 - 10^5$

$(20)^3 - 10^5$

$8000 - 100\,000$

$= -92000$

c) $\dfrac{12^3}{36(12^0 - 13^1)}$

Top: $12^3 = 1728$

Bottom: $36(12^0 - 13^1)$

$36(1 - 13)$

$36(12)$

$= 432$

$\dfrac{\text{Top}}{\text{Bottom}} = \dfrac{1728}{432} = 4$

d) $\dfrac{81^2}{9^2 + (-9)^2}$

Top: $81^2 = 6561$

Bottom:

$9^2 + (-9)^2$

$= 81 + 81$

$= 162$

$\dfrac{\text{Top}}{\text{Bottom}} = \dfrac{6561}{162} = \dfrac{81}{2} = 40.5$

e) $(14^2 + 6^3)^2$

$= (196 + 216)^2$

$= (412)^2$

$= 169\ 744$

f) $(11^3 + 25^2)^0 + (27^2 - 33^4)$

$1 + (729 - 1\ 185\ 921)$

$1 + (-1\ 185\ 192)$

$= -1\ 185\ 191$

19) $\frac{10 \times 130}{25} + 25^3 \div 10^6 \times 14 \times 150$

$52 + 15625 - 1000\,000 \times 14 \times 150$

$52 + 32.8125$

84.8125