Warm Up Grade 8

Section 2.5 Order of Operations with Integers
continued

Evaluate: (MUST SHOW WORK)

$$\frac{4 - [\ 18 - (-4)\ ] \times (-2)}{2 \times (-3)}$$

Top

Bottom

Bottom
$2 \times (-3)$
$= (-6)$

Top

$4 - [18 - (-4)] \times (-2)$

$4 - [18 + (+4)] \times (-2)$

$4 - (+22) \times (-2)$

$4 - (-44)$

$(4) + (+44)$

$= (+48)$

Top ÷ Bott

$(+48) \div (-6)$

$= \boxed{-8}$

Homework Solutions for Thursday Night Page 92 #3 to #7

4.

3a) $7 + (-1) \times (-3)$

$7 + 3$

10

b) $(-18) \div (-6) - (-4)$

$+3 + (+4)$

$+7$

c) $6 + (-4) - (-2)$

$2 + (+2)$

$+4$

d) $(-2)[7 + (-5)]$

$(-2) \times (+2)$

-4

e) $(-3) \times (-4) \div (-1)$

$+12 \div (-1)$

-12

f) $8 - 3 + (-4) \div (-1)$

$8 - 3 + 4$

$5 + 4$

9

Homework Solutions for Thursday Night Page 92 #3 to #7

5 $3-(-5)+8(-4)$ - do mult first

$3-(-5)+(-32)$ - do subt

$3+(+5)+(-32)$

-24

Elijah added before subtracting which was where he made his mistake.

6a) $12\div(2\times3)-2$

$12\div6-2$

$2-2$

0

b) $12\div2\times(3-2)$

$12\div2\times1$

6×1

6

7a) $7(4)-5$

$28-5$

23

b) $6[2+(-3)]$

$6\times(-3)$

-18

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

$(-3)+(-28)$

-31

d) $(-6)+4(-2)$

$-6+(-8)$

-14

e) $15\div[10\div(-2)]$

$15\div(-5)$

-3

f) $18\div2(-6)$

$9\times(-6)$

-54

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8a) $6(5-7)-3$

$6\times(5+(-7))-3$

$6\times(-2)-3$

$-12+(-3)$

-15

b) $4-[5+(-11)]$

$4-(-6)$

$4+(+6)$

$+10$

c) $[4-(-8)]\div 6$

$[4+(+8)]\div 6$

$12\div 6$

2

d) $8-66\div(-11)$

$8-(-6)$

$8+(+6)$

$+14$

e) $(-24)\div 12+(-3)(-4)$

$(-2)+(+12)$

$+10$

f) $6(-3)+(-8)(-4)$

$-18+(+32)$

$+14$

9a) $\frac{(-7)\times 4+8}{4} = \frac{-20}{4}$

$(-7)\times 4+8$

$-28+8$

-20

$= -5$

b) $\frac{4+(-36)\div 4}{-5} = \frac{-5}{-5}$

$4+(-36)\div 4$

$4+(-9)$

-5

$= +1$

c) $\frac{-32}{-6(-2)-(-4)} = \frac{-32}{+16}$

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

$+12+(+4)$

$+16$

$= -2$

d) $\frac{9}{(-3)+(-18)\div 3} = \frac{9}{-9}$

$(-3)+(-18)\div 3$

$-3+(-6)$

-9

$= -1$

10. $\frac{4(-3)+7(-4)}{5(-1)} = \frac{-40}{-5}$

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

$-12+-28$

-40

b) $\frac{[19-(-5)]\div(-3)}{2(-2)}$ $= \frac{-8}{-4}$

$+2$

$[19-(-5)]\div(-3)$

$(19+(+5))\div-3$

$+24\div-3$

-8

c) $\frac{32\div4-(-28)\div(-7)}{12\div(-4)}$ $= \frac{+12}{-3}$

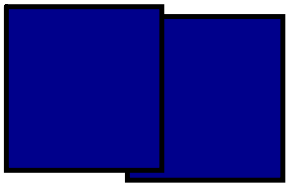
$= -4$

$32\div4-(-28)\div7$

$8-(-4)$

$8+(+4)$

$+12$



d) $\frac{12-4(-6)}{[3-(-3)]\times(-3)}$ $= \frac{+36}{-18}$

$= -2$

$12-4(-6)$

$12-(-24)$

$12+(+24)$

$+36$

$[3-(-3)]\times3$

$(3+(+3))\times(-3)$

6×-3

-18

11. $(-40)-2[-8\div2]$

$-40-2\times(-4)$

$-40-(-8)$

$-40+(+8)$

-32

Robert was correct

12. $(-20)\div2-(-2)$

$-10-(-2)$

$-10+(+2)$

-8

$(-20)\div[2-(-2)]$

$-20\div(2+2)$

$-20\div+4$

-5

b) $-21+6\div3$

$-21+2$

-19

$(-21+6)\div3$

$-15\div3$

-5

c) $10+3\times2-7$

$10+6-7$

9

$10+3\times(2-7)$

$10+3\times-5$

$10+(-15)$

-5

13. $405 - 4 \times 45$ $405 + 4(-45)$ ✓

$405 - 180$

225

She has $225 in her account.

15. $\dfrac{(-2)+(+5)+(-8)+(-4)+(-11)+(-10)+(-5)}{7}$

$\dfrac{-35}{7}$

-5

17. a) (-10) [X] (-2) [+] $1 = 21$

b) (-5) [−] (-2) [+] $4 = 1$

c) 6 [X] (-7) [−] $2 = -44$

d) $(-2)(-2)$ [−] $8 = -4$

SHEET

Grade 8 Unit 2 Integers

Homework Solutions for Friday's Class

Order of Operations (Extra Practice)

Evaluate each expression.

1) $10 \div (4 - 2)$

$= 10 \div (2)$

$= 5$

2) $-16 \div (3 - -1)$

$= -16 \div (3 + +1)$

$= -16 \div (+4)$

$= -4$

3) $(1 - 5) \div -2$

$= -4 \div -2$

$= (+ 2)$

4) $(-6 - 4) \div 2$

$= (-10) \div 2$

$= (-5)$

5) $-16 \div (-1 - 3)$

$= - 16 \div (-4)$

$= (+4)$

6) $4 - 15 \div -3$

$= 4 + 5$

$= 9$

or $= 4 - (-5)$

$= 4 + 5$

7) $(-12 \times 2) \div 6$

$= (-24) \div 6$

$= (-4)$

8) $-6 \div -2 + 2$

$= +3 + 2$

$= (+5)$

9) $-6 + -5 - -1$

$= -6 + (-5) + (+1)$

$= (-11) + (+1)$

$= (-10)$

10) $4 \times -15 \div 5$

$= (-60) \div 5$

$= (-12)$

13) $2 + 4 \times 5 + 6$

$= 2 + (20) + 6$

$= 22 + 6$

$= 28$

14) $12 \div 4 + 6 \div 2$

$= 3 + 6 \div 2$

$= 3 + 3$

$= 6$

11) $6 + 6 \times 2 + 6$

$6 + 12 + 6$

$18 + 6$

24

12) $5-(4-(3-2))$

$= 5-(4-(1))$

$= 5-(3)$

$= 2$

Homework Solutions for Friday's Class

15) $(5-(2+2))\times 3$

= (5 - (4)) x 3

= (+1) x 3

= 3

16) $5(16\div 4+18\div 3)$

= 5(4 + 18÷3)

= 5(4 + 6)

= 5 (10)

= 50

17) $8\div 4+5-2-1$

= 2 + 5 - 2 - 1

= 7 - 2 - 1

= 5 - 1

= 4

18) $5-2\div(5-(5-2))$

= 5 - 2÷(5 - (3))

=5 - 2÷(2)

=5 - 1

= 4

19) $(1+6)(6-2)-2$

= (7)(4) - 2

= 28 - 2

= 26

20) $(4-3)\times 6(6+1)$

= (1) x 6(7)

= 6(7)

= 42

Homework Solutions for Friday's Class

21) $(13 + 7 \times (-2)) + 4 \times 6 \div 2$

$(13 + (-14)) + 4 \times 6 \div 2$

$-1 + 4 \times 6 \div 2$

$-1 + 24 \div 2$

$-1 + 12$

$= 11$

22) $9^2 - (-10) \div 2 (7 - 12)$

$= 9^2 - (-10) \div 2 (-5)$

$= 81 - (-10) \div 2 (-5)$

$= 81 - (-5)(-5)$

$= 81 - (+25)$

$= 56$

Extra Practice 5

Homework Solutions for Friday's Class

Master 2.22

SHOW ALL WORK ON YOUR OWN PAPER

Lesson 2.5: Order of Operations with Integers

1. Evaluate. State which operation you do first.

a) $8 \times 5 - 4$

$= 40 - 4$

$= 36$

b) $(-4)[(-4) + 9]$

$(-4)(+5)$

-20

c) $18 \div [(-7) - 2]$

$= 18 \div [(-7) + (-2)]$

$= 18 \div [-9]$

$= -2$

d) $(-3) + (-14) \div (-2)$

$= (-3) + (+7)$

$= +4$

2. Evaluate. Show all steps.

a) $4(-8) - 9$

$= (-32) - 9$

$= (-32) + (-9)$

$= -41$

b) $(-1) + (-20) \div 5$

$= (-1) + (-4)$

$= -5$

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

$= (-9) + (+8)$

$= -1$

d) $(-3)[(-8) - 11]$

$= (-3)[(-8) + (-11)]$

$= (-3)[(-19)]$

$= +57$

3. Evaluate.

a) $\dfrac{(-5) + (-9)}{2} = \dfrac{(-14)}{2} = -7$

b) $\dfrac{-12}{(-2)(-3)} = \dfrac{-12}{(+6)} = -2$

c) $\dfrac{24 \div (-6) - 1}{-5}$

$= \dfrac{(-4) - 1}{-5}$ $(-4) + (-1)$

$= \dfrac{-5}{-5}$

$= +1$

d) $\dfrac{36}{(-5) \times 2 + 4}$

$= \dfrac{36}{(-10) + 4}$

$= \dfrac{36}{(-6)}$

$= -6$

Homework Solutions for Friday's Class

4. Evaluate.

a) $(-72) \div 9 + 4 \times (-3)$

$(-8) + 4 \times (-3)$

$(-8) + (-12)$

-20

b) $5(-2) - 63 \div (-7)$

$= (-10) - 63 \div (-7)$

$= (-10) - (-9)$

$= (-10) + (+9)$

$= -1$

c) $\dfrac{4(-5)+[28 \div (-4)]}{5 \times (-2)+1}$

$= \dfrac{4(-5)+[\ -7\ ]}{(-10)\quad +1}$ Top Both

$= \dfrac{-20+[\ -7\ ]}{(-10)\quad +1}$ Top Both

$= \dfrac{-27}{-9}$ Top Both

$= +3$

d) $\dfrac{4 \times (-4)+(-8)}{[10+(-1)]+[2 \times (-3)]}$

$= \dfrac{(-16) \quad +(-8)}{[\ (+9)\ ]+[\ (-6)\ ]}$

$= \dfrac{(-24)}{(+3)}$

$= -8$

Homework Solutions for Friday's Class

5. Evaluate each expression. Then insert one pair of square brackets in each expression so it evaluates to –1.

a) $12 \div [(-4) + (-8)]$

b) $[(-9) + 6] \div 3$

c) $5 \div (-5) \times (0 + 1)$

$12 \div (-4) + (-8)$

$-3 + (-8)$

-11

You try

$$\frac{14-2\times6}{2\times2+3\times8} = \frac{2}{28} = \frac{1}{14}$$

top

$14 - 2\times6$

$14 - 12$

$+2$

Bottom

$2\times2 + 3\times8$

$4 + 3\times8$

$4 + 24$

28

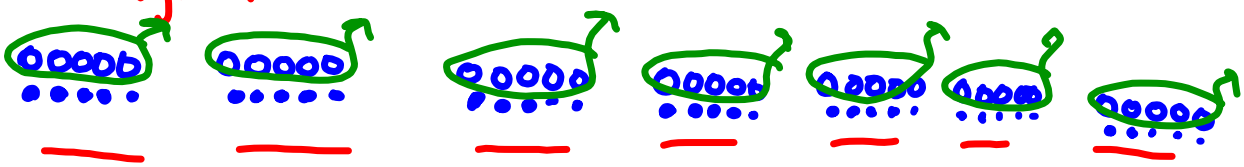
=

=

$(-7) \times (-5) = +35$

of -5

take away 7 groups



Class/Homework

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#2(a,b...MODEL), #3, #4(just the sign),

#5(a,c,d....show work for c,d using distributive property),

#6(a,b,c,d), #7, 8

&

Evaluate the following (Show work)

$$\frac{2 + [\,4 \times (-2 \times 3) - 10]}{3 + 2(10) \div 4}$$

Test Wednesday, Sept. 24