

Warm-Up January 14, 2020

Find the polynomial that represents

A) perimeter

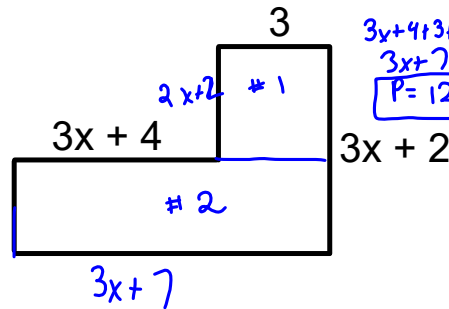
B) Area

$A = bh$
 $= 3(2x+2)$
 $= 6x+6$

$A = bh$
 $= x(3x+7)$
 $= 3x^2+7x$

#1 + #2

$6x+6 + 3x^2+7x$
 $3x^2+6x+7x+6$
 $A = 3x^2+13x+6$



$P =$
 $3x+4+3+3x+2+$
 $3x+7+x+2+2$
 $P = 12x+18$

BEDMAS

Solve for the perimeter and area if $x=2$

$P = 12x+18$
 $= 12(2)+18$
 $24+18$
 $= 42$

$A = 3x^2+13x+6$
 $3(2)^2+13(2)+6$
 $3(4)+26+6$
 $12+26+6$
 44

$$-4\frac{2}{3} \div \left[\left(-\frac{1}{3} \right) + 4\frac{1}{6} \right] + \left(-3\frac{2}{5} \right)$$

$$-\frac{14}{3} \div \left(\frac{-1}{3} + \frac{25}{6} \right) + \frac{-17}{5}$$

$$-\frac{14}{3} \div \left(\frac{-2}{6} + \frac{25}{6} \right) + \frac{-17}{5}$$

$$\frac{-14}{3} \div \frac{23}{6} + \frac{-17}{5}$$

$$\frac{-14}{3} \times \frac{6}{23} + \frac{-17}{5}$$

$$\rightarrow \frac{-84}{69} + \frac{-17}{5}$$

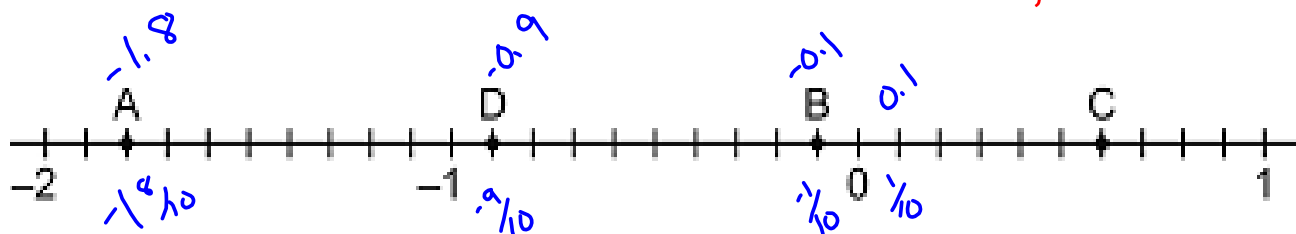
$$\frac{-420}{345} + \frac{-1173}{345} = \frac{-1593}{345}$$

$$-4\frac{213}{345}$$

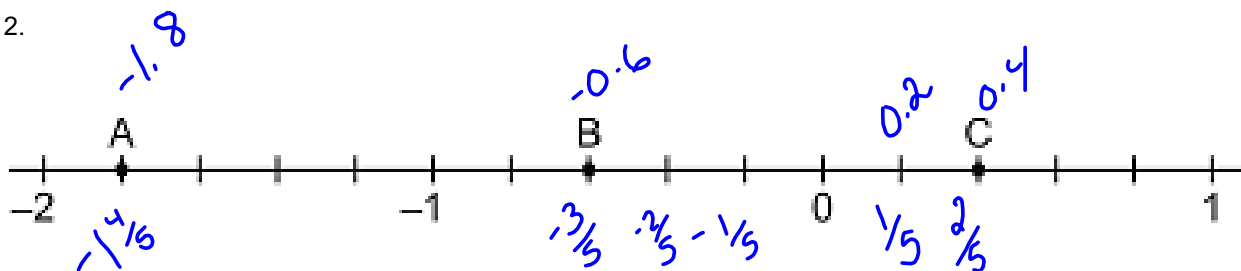
$$-4\frac{71}{115}$$

1. Find the number represented by A, B, C, D

Decimal, fraction



2.



$$\frac{115}{42} = 2\frac{31}{42}$$

Unit 2

Exam Review

Powers and Exponents

Powers

$$2^3$$

Base

2

Exponent

3

Repeated multiplication

$$2 \times 2 \times 2 \leftarrow$$

Evaluate

8

Evaluate

a. $(-2)^3$ ← odd
-8

B. $-(2)^4$
-16

Answer
-2⁴ (-3x-3x-3x-3)
C. $-(-3)^4$ ← even
-81

D. -3^3
-27
(3x3x3)

E. $-(-3)^3$
27

Zero Exponent

Any base with a zero exponent equals 1

$$(2)^0$$

|

$$(-2)^0$$

|

$$-(2)^0$$

-|

$$-(-2)^0$$

-|

Order of Operations

BEDMAS

$$8 \times 5^2 + 2^3 - (5^3 - 3^2)$$

$$8 \times 25 + 8 - (125 - 9)$$

$$8 \times 25 + 8 - 116$$

$$200 + 8 - 116$$

$$\textcircled{92}$$

$$B. \quad [2 \times (-1)^3 - 6]^2$$

$$(2 \times -1 - 6)^2$$

$$(-2 - 6)^2$$

$$(-8)^2$$

$$64$$

$$C. \quad (-3)^2 - 2 + (-3)^4 - 1^5 + 1^0$$

$$9 - 2 + 81 - 1 + 1$$

$$7 + 81 - 1 + 1$$

$$88$$

Evaluate

$$10^3 = 1000$$

$$10^6 = 1000000$$

$$10^0 = 1$$

$$10^1 = 10$$

Write using a power of 10.

37 241

Expanded

form

Power of

10

EXPONENT RULES!

EXPONENT LAW 1

Powers with the same base being multiplied **ADD THE EXPONENTS!!!**

$$a) \quad 5^2 \times 5^3 = 5^{2+3} = 5^5 \quad 3125$$

$$b) \quad (-2)^6 \times (-2)^3 = (-2)^{6+3} = (-2)^9 \quad -512$$

Powers with the same base being divided **SUBTRACT THE EXPONENTS!!!**

$$c) \quad 8^9 \div 8^5 = 8^4 \quad 4096$$

$$d) \quad \frac{(-6)^{10}}{(-6)^4} = (-6)^6 \quad 46656$$

EXPONENT LAW 2

WHEN A POWER IS RAISED TO AN EXPONENT

MULTIPLY THE EXPONENTS!!!

e) $(3^4)^2 = 3^8$ Simplify Evaluate.
6561

$$3^4 \times 3^4 = 3^8$$

1) $3^2 \times 3^2$ **SIMPLIFY** 2) $(-5)^2 \times (-5)^4$

\downarrow
 Use exponent laws

3^4

$(-5)^6$

3. $\frac{5^8}{5^2}$

5^6

4. $\frac{(-2)^3}{(-2)^0}$

$(-2)^{3-0}$

$(-2)^3$

5. $(4^8)^3$

4^{24}

HW
Ques 1-19
Show your work
Do not mark on sheet.