

Binomial Common Factors.

Thursday, March 5, 2020 12:28 PM

Expression: eg $3x+5$ Expressions don't have equal signs so can't be solve but can be evaluated if value of x is given

Equation: eg $3x+5=9$ Equations have equal signs + can be solved.

Evaluate $3x+5$ for $x=-2$
 $3(-2)+5$
 $-6+5=-1$

Polynomials are expressions.

Factor: $\frac{6x^3}{2 \times 2} - \frac{4x^2}{2 \times 2}$
 $2x^2(3x-2)$

Factor: $2x \underbrace{(3x-2)}_{(3x-2)} + 5 \underbrace{(3x-2)}_{(3x-2)}$

GCF = $3x-2$ $(3x-2)(2x+5)$

Factor $x \underbrace{(x-7)}_{(x-7)} - 2 \underbrace{(x-7)}_{(x-7)}$
 $(x-7)(x-2)$

Try: Factor $4x \underbrace{(x+5)}_{(x+5)} - 3 \underbrace{(x+5)}_{(x+5)}$

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

$3x(x-1) + 4(1-x)$

$x=8$
 $8-1=\sqrt{7}$

$$3x(x-1) - 4(-1+x)$$

$$(x-1)(3x-4)$$

$$1-8 = -7$$

opposites

$$\frac{(1-x)}{-1} = \frac{-1}{-1}(-1+x)$$

$$\frac{(1+x)(x-1)}{(-1+8)(8-1)}$$

7 7

Try

Factor

$$2x(x-2) - 3(2-x)$$

$$2x(x-2) + 3(-2+x)$$

$$(x-2)(2x+3)$$

Factor

$$3x^2 - 6x + 2xy - 4y$$

$$3x(x-2) + 2y(x-2)$$

$$(x-2)(3x+2y)$$

is called factor by grouping

Try

$$4xy - 8y + 6x - 12$$

$$4y(x-2) + 6(x-2)$$

$$(x-2)(4y+6)$$

$$2(x-2)(2y+3)$$

$$\begin{array}{r} 12 \\ \wedge \\ 3 \times 4 \\ 1 \quad \wedge \\ 3 \times 2 \times 2 \end{array}$$

take this sign

$$2(x-2)(2y+3)$$

Factor $\frac{2x^4 + x^3}{x^3} - \frac{8x - 4}{x^3}$ take out x^3

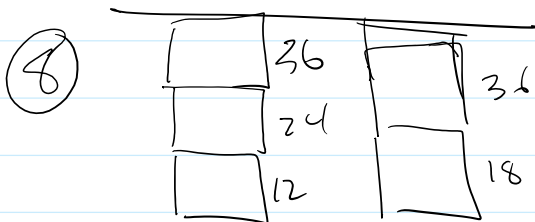
$$x^3 (2x + 1) - 4(2x + 1)$$

$$(2x + 1)(x^3 - 4)$$

Text pg 200-224 # 7, 8, 12-14
 Ho pg 348-50 # 14, 16, 26 (try 25)

16 e) $2x^2(3a - 2b) + 5x(3a - 2b) - 9(3a - 2b)$

$$(3a - 2b)(2x^2 + 5x - 9)$$



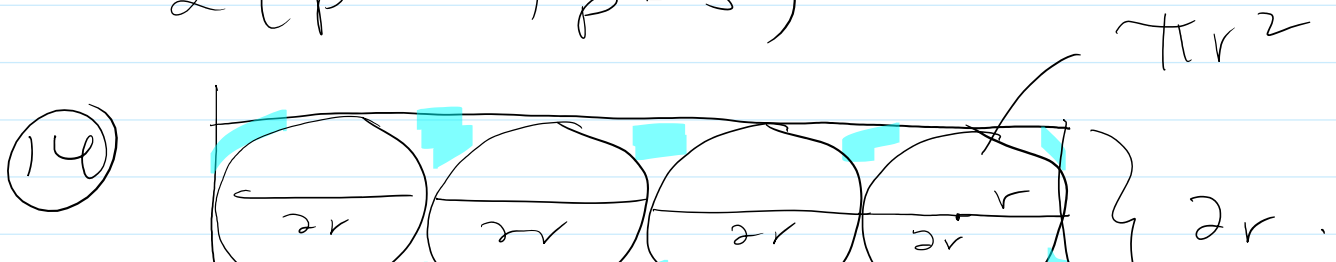
12 e) $2p^2 - 20p + 6p - 10 = 2p(p - 10 - 3) - 10$

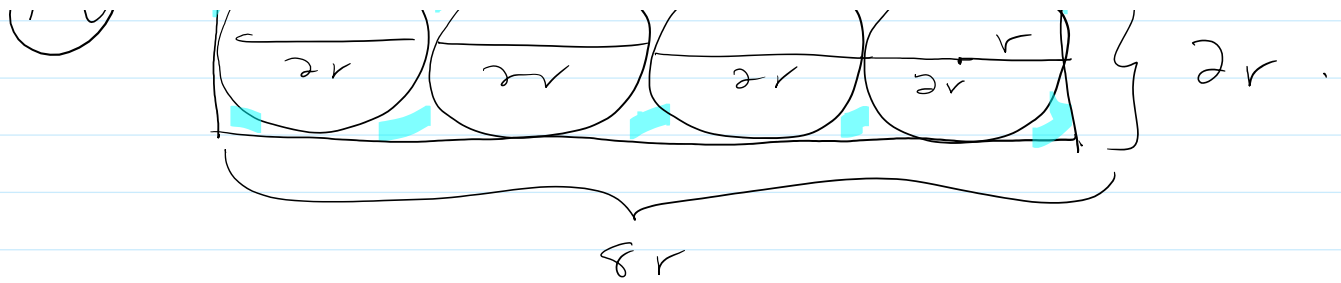
$$2p(p - 10) + 2(3p - 5)$$

$$2p^2 + 6p - 20p - 10$$

$$2(p^2 + 3p - 10p - 5)$$

$$2(p^2 - 7p - 5)$$





$$\text{Area } \square = 8r \cdot 2r = 16r^2$$

$$\text{Area } 4\text{O} = 4\pi r^2$$

$$16r^2 - 4\pi r^2$$

$$4r^2 (4 - \pi)$$