

“O estudo é glorioso, primeiro porque purifica os costumes dos homens, segundo porque proporciona o benefício da cultura.” *Cassiodoro*

1. Grandezas e Medidas

1) Determine a medida do complemento dos ângulos cujas medidas são:

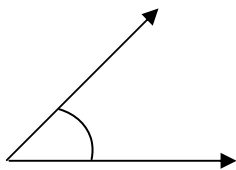
- a) 30° _____ b) 50° _____ c) 15° _____ d) 67° _____

2) Determine a medida do suplemento dos ângulos cujas medidas são:

- a) 120° _____ b) 43° _____ c) 30° _____ d) 95° _____

3) Utilizando o transferidor, meça e classifique os seguintes ângulos:

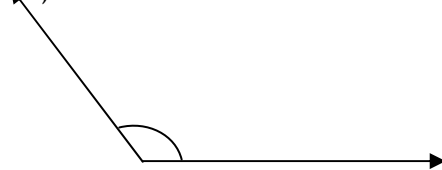
a)



Medida: _____

Classificação: _____

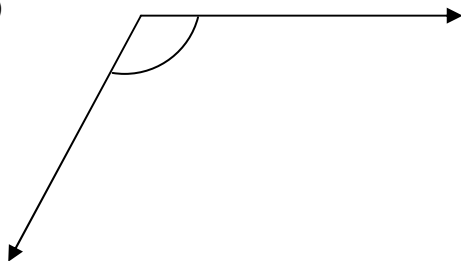
b)



Medida: _____

Classificação: _____

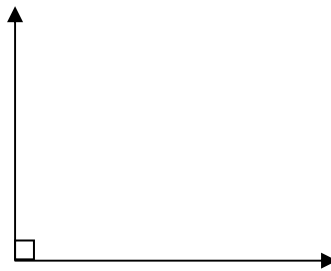
c)



Medida: _____

Classificação: _____

d)

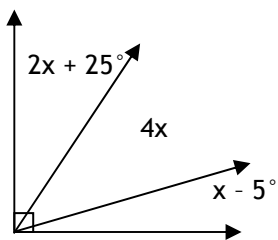


Medida: _____

Classificação: _____

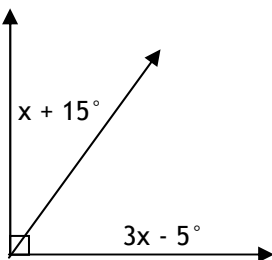
4) Calcule as medidas desconhecidas dos ângulos das figuras abaixo:

a)



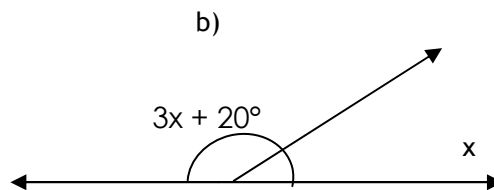
$x =$ _____

c)



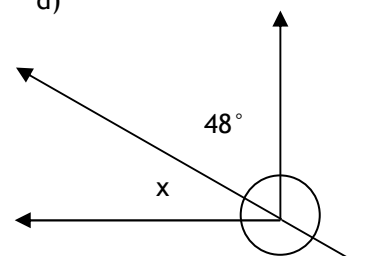
$x =$ _____

b)



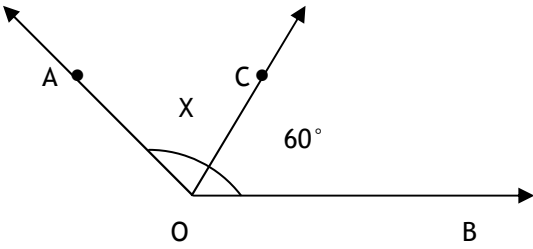
$x =$ _____

d)

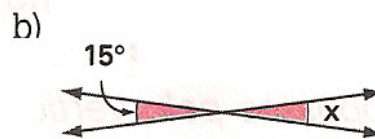
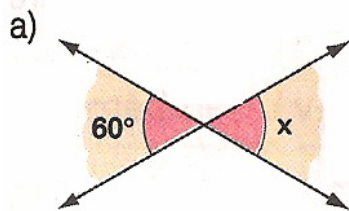


$x =$ _____

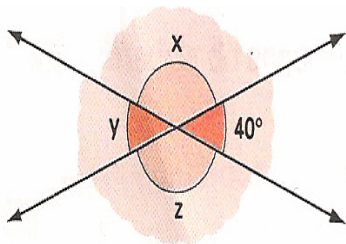
5) Sendo OC a bissetriz de $\hat{A}OB$, calcule x :



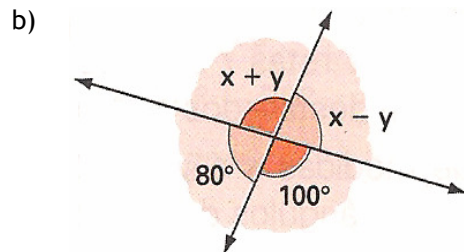
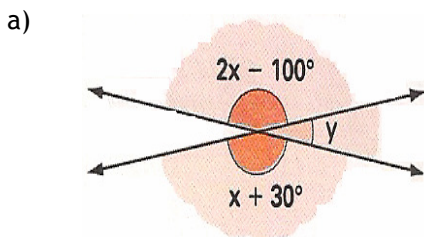
6 - Observando cada figura, dê a medida x indicada:



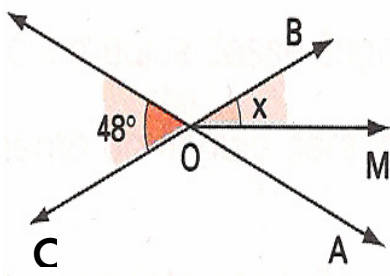
7) Na figura abaixo, vamos calcular as medidas X , Y e Z indicadas:



8) Vamos determinar os valores para X e Y indicados na figura abaixo:

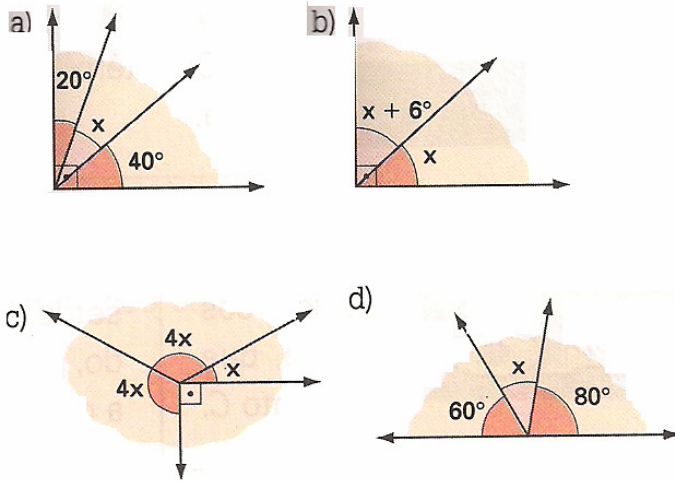


9) Na figura abaixo, \vec{OM} é a bissetriz do ângulo $\hat{A}OB$. Determine a medida x indicada:



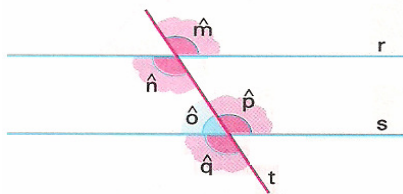
10) Analisando a figura do exercício anterior, determine a medida do ângulo \hat{COA} .

11) Vamos calcular, em graus, a medida x indicada nas figuras.



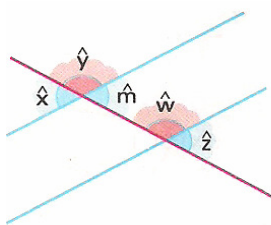
2. Retas Paralelas

12) Na figura abaixo, identifique um par de ângulos:



- o.p.v.
- adjacentes suplementares
- correspondentes
- alternos internos
- alternos externos
- colaterais internos

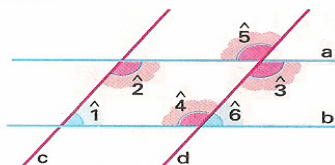
13) Na figura abaixo, qual o nome dos seguintes pares de ângulos:



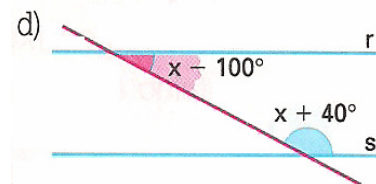
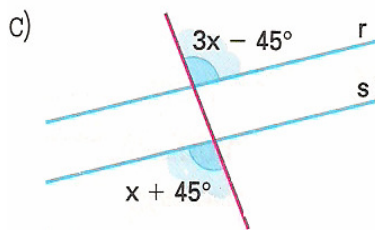
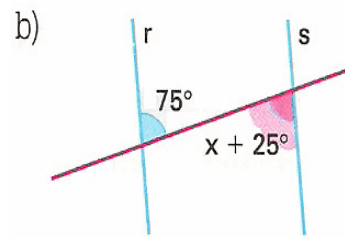
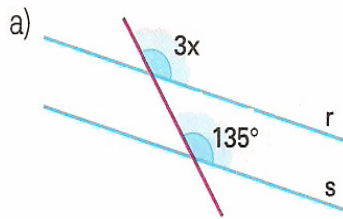
- \hat{m} e \hat{z}
- \hat{m} e \hat{w}
- \hat{v} e \hat{z}
- \hat{x} e \hat{z}
- \hat{x} e \hat{y}
- \hat{x} e \hat{m}

14) Na figura abaixo, $a \parallel b$ e $c \parallel d$. Nessas condições, destaque os pares de ângulos:

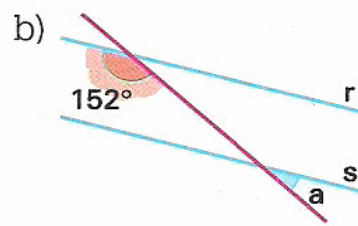
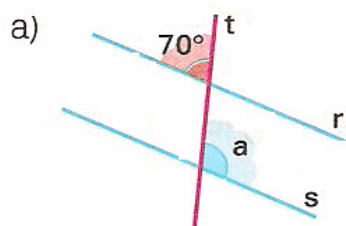
- correspondentes
- alternos internos
- colaterais internos
- opostos pelo vértice
- adjacentes suplementares



15) Nas figuras abaixo, determine o valor de x sabendo que $r \parallel s$.



16) Nas figuras abaixo, determine o valor de a , sendo $r \parallel s$:



17) Duas retas paralelas cortadas por uma transversal formam dois ângulos correspondentes representados, em graus, por $5x + 20^\circ$ e $2x + 50^\circ$. Determine o valor de x :

18) Duas retas paralelas cortadas por uma transversal formam ângulos colaterais internos expressos em graus por $3x - 50^\circ$ e $2x - 10^\circ$. Determine as medidas desses ângulos.

3. Produtos Notáveis

19) Complete a tabela:

a	b	$(a + b)^2$	$a^2 + b^2$
5	3		
0	6		
3	-1		
-1	4		

O que você observou? _____

20) Calcule:

a) $(x + 7)^2 =$ _____

b) $(5 + 2m)^2 =$ _____

c) $(3n + 2m)^2 =$ _____

d) $(7 + x)^2 =$ _____

e) $(5x^2 + 1)^2 =$ _____

f) $(2bc + a)^2 =$ _____

g) $(x + 0,5)^2 =$ _____

h) $(u + \frac{1}{2})^2 =$ _____

i) $(2 - x^3)^2 =$ _____

j) $(4t - 3u)^2 =$ _____

l) $(n - 6)^2 =$ _____

m) $(5x - 2y)^2 =$ _____

n) $(xy - 10)^2 =$ _____

o) $(t - 0,2)^2 =$ _____

p) $(x + 9) \cdot (x - 9) =$ _____

q) $(3x + 5) \cdot (3x - 5) =$ _____

r) $(m^2 - 6) \cdot (m^2 + 6) =$ _____

s) $(2a + 5) \cdot (2a - 5) =$ _____

t) $(w^3 - 2) \cdot (w^3 + 2) =$ _____

u) $(4m + 3n) \cdot (4m + 3n) =$ _____

v) $(0,3 - a) \cdot (0,3 + a) =$ _____

x) $(x + \square) \cdot (x - \square) =$ _____

21) Simplifique as expressões:

a) $(x + 1)^2 + (x + 2)^2 - (2x + 1) =$ _____

b) $(2x + 1)^2 + (3x + 1)^2 =$ _____

c) $(x + 5)^2 - x(x + 3) =$ _____

d) $(t - 4)^2 - (x - 1)^2 =$ _____

e) $(x + 1)^2 - (x - 2)^2 =$ _____

f) $\frac{1}{2}[(x + 1)^2 + (x - 1)^2] =$ _____

g) $(m - 1)^2 - (m + 1)(m - 1) =$ _____

h) $(x + 4)(x - 4) - (x - 4)^2 =$ _____

22) $(2a - 5b)^2$ é o mesmo que:

a) $4a^2 - 20a^2b^2 + 25b^2$ b) $4a^2 + 20ab - 25b^2$ c) $4a^2 + 20ab + 25b^2$ d) $4a^2 - 20ab - 25b^2$ e) $4a^2 - 20ab + 25b^2$

Resolução: _____

23) A expressão $(2n+1)^2 + (n+2)^2 + 2(n+1) \cdot (n-1)$ é igual a:

a) $7n^2 + 6n + 3$ b) $7n^2 + 6n - 3$ c) $7n^2 + 6n + 4$ d) $7n^2 + 8n + 4$ e) $7n^2 + 8n + 3$

Resolução: _____

4. Fatoração

24) Fatore as expressões:

a) $7q^2 - 28 =$ _____ b) $33x + 22y - 55z =$ _____

c) $x^6 + x^7 + x^8 =$ _____ d) $36cd + 6cd^2 =$ _____

e) $x(a + b) + y(a + b) =$ _____ f) $2a(x - 1) - b(x - 1) =$ _____

g) $7a - 7c + ma - mc =$ _____ h) $a^3 + 3a^2 + 2a + 6 =$ _____

i) $x^3 - x^2 + 5x - 5 =$ _____ j) $x^2 - 36 =$ _____

l) $25 - a^2 =$ _____ m) $9x^2 - 16 =$ _____

n) $9x^2 - 16 =$ _____ o) $1 - 81a^2 =$ _____

p) $100 - \pi^2 =$ _____ q) $36x^4 - y^6 =$ _____

r) $x^2 + 2x + 1 =$ _____ s) $x^2 - 2x + 1 =$ _____

t) $1 - 6m + 9m^2 =$ _____ u) $x^2 + 12x + 36 =$ _____

v) $36a^2 - 12ac + c^2 =$ _____ x) $y^4 + 4y^2 + 4 =$ _____

25) Agrupe os termos e fatore:

a) $5x + ax + 5y + ay =$ _____

b) $x^3 + 2x^2 + 7x + 14 =$ _____

c) $c^2 - c + cx - x =$ _____

d) $ax + bx + ay + by + az + bz =$ _____

