## MATHEMATICS

# Topic: ALGEBRA, EQUATIONS, AND INEQUALITIES GRADE 10

**CAPS ALIGNED** 



# **SIMPLIFY EXPRESSIONS**

www.nbmmaths.co.za



#### **Simplify- GRADE 10 Exercises - A**

#### **DBE/NOVEMBER 2015**

- 1.2 Simplify the following expressions fully:
  - 1.2.1  $\frac{3}{a-4} + \frac{2}{a+3} \frac{21}{a^2 a 12}$
  - $\frac{10^{2x+3}.4^{1-x}}{25^{2+x}}$ 1.2.2

tions

$$\frac{\text{DBE/NOVEMBER 2015}}{1.2 \text{ Simplify the following expressions fully:}} \\ 1.2.1 \quad \frac{3}{a-4} + \frac{2}{a+3} - \frac{21}{a^2 - a - 12} \\ 1.2.2 \quad \frac{10^{2\times 1} 4^{1\times}}{25^{2\times 2}} \\ \hline 1.2.2 \quad \frac{10^{2\times 1} 4^{1\times}}{25^{2\times 2}} \\ \hline \frac{59}{(a-4)} + \frac{2}{(a+3)} - \frac{21}{(a^2 - a - 1)^2} \\ = \frac{3(a+3) + 2(a-4) - 21}{(a-4)(a+3)} \\ \hline \frac{-3(a+3) + 2(a-4) - 21}{(a-4)(a+3)} \\ = \frac{-3a+9 + 2a-8 - 21}{(a-4)(a+3)} \\ = \frac{-3a+9 + 2a-8 - 21}{(a-4)(a+3)} \\ = \frac{5a-20}{(a-4)(a+3)} \\ = \frac{5(a-4)}{(a-4)(a+3)} \\ = \frac{5(a-4)}{(a-4)(a+3)} \\ = \frac{5(a-4)}{(a-4)(a+3)} \\ = \frac{5(a-4)}{(a+3)} \\ = \frac$$

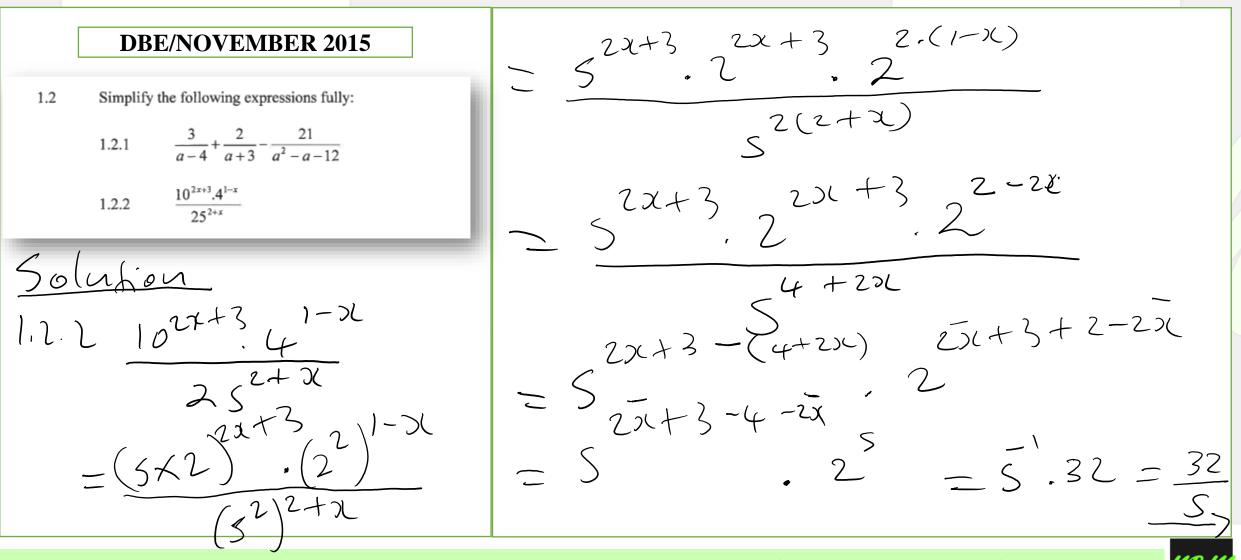
 $=\frac{5}{(a+3)}$ 

MATHEMATICS - Grade 10 Algebra, Equations, and Inequalities (www.nbmmaths.co.za)

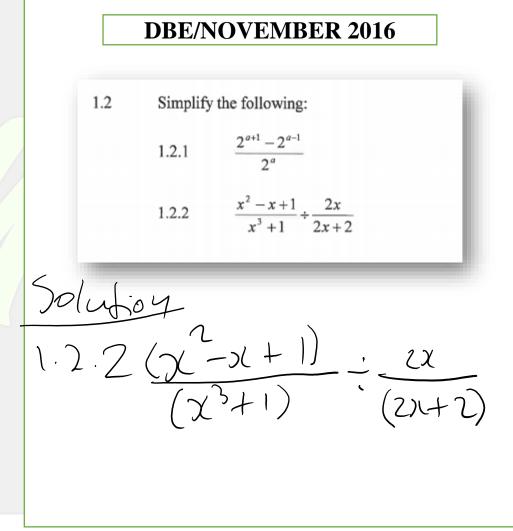


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#### <u>Simplify- GRADE 10</u> <u>Exercises - A</u>



#### Simplify- GRADE 10 Exercises - B



2X+2) X 272 () - '



### Simplify- GRADE 10 Exercises - C

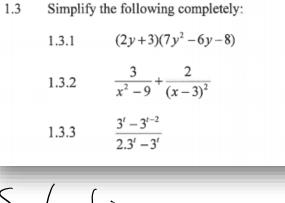
#### **DBE/NOVEMBER 2017**

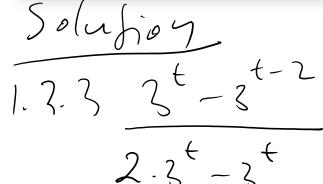
1.3	Simplify the following completely:	~
	1.3.1 $(2y+3)(7y^2-6y-8)$	
	1.3.2 $\frac{3}{x^2-9} + \frac{2}{(x-3)^2}$	-
	1.3.3 $\frac{3^t - 3^{t-2}}{2.3^t - 3^t}$	- (
51	(	_
)00	you	
1. 3. 1	$(2-1+3)(7-1^2-6-1-8)$	_
	= 2 - 1(7 - 1) - 6 - 1 - 8) + 3(7 - 6 - 1 - 8)	-8) -
	= 14-13-12-16-1+24 - 4-24	
	- 14-13 + 91 - 34-1-24	-
	1	

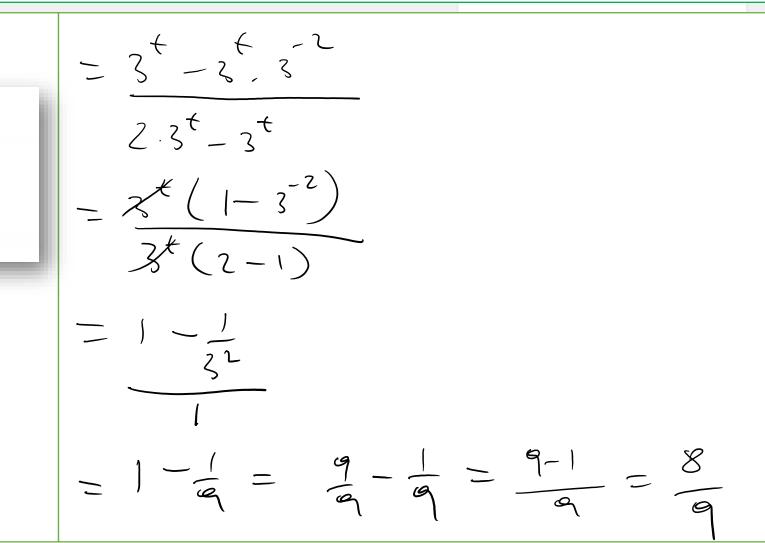
 $1.3.2 \frac{3}{(2^2-9)} + \frac{2}{(21-3)^2}$  $\frac{3}{(\chi-\chi)(\chi+\chi)} + \frac{2}{(\chi-\chi)^{2}} + \frac{2}{(\chi-\chi)^{2}} + \frac{2}{(\chi-\chi)} + \frac$  $\frac{3(3(-2)+2(3+3)}{(1-2)^{2}(3(+3))}$  $= \frac{31(-9+2)(+6)}{(2^{2}-3)(x+3)}$  $= \frac{(5)(-3)}{(3)^2 - 3)(x+3)}$ 

### Simplify- GRADE 10 Exercises - C

# DBE/NOVEMBER 2017









#### ALGEBRA, EQUATIONS, AND INEQUALITIES - GRADE 10 Exercises - D

#### **DBE/NOVEMBER 2018**

1.2 Simplify the following expressions fully:

- 1.2.1  $(x+2)(x^2-x+3)$
- 1.2.2  $\frac{5}{x+3} \frac{3}{2-x}$
- $1.2.3 \qquad \frac{25^{-x}.15^{x+1}}{3^{x}.5^{-x}}$

(2,2,5) - 3(2+2) (2-2) $= \frac{5}{(2+3)} - \frac{3}{(2-2)}$  $= \frac{5}{(x+3)} + \frac{3}{(x-2)}$ =  $\frac{5}{(x+3)} + \frac{3}{(x-2)} + \frac{3}{(x-2)} \times \frac{(x+3)}{(x-2)}$ =  $\frac{5}{(x+3)} + \frac{3}{(x-2)} \times \frac{(x+3)}{(x-2)}$  $= \frac{5\pi - 10}{(2+3)(3-2)} (34)$ =(8)(-1)(3(+3)()(-2)



# **ALGEBRA, EQUATIONS, AND INEQUALITIES - GRADE 10**

**Exercises - D** 



1.2 Simplify the following expressions fully:

1.2.1 
$$(x+2)(x^2-x+3)$$

1.2.2 
$$\frac{5}{x+3} - \frac{3}{2-x}$$

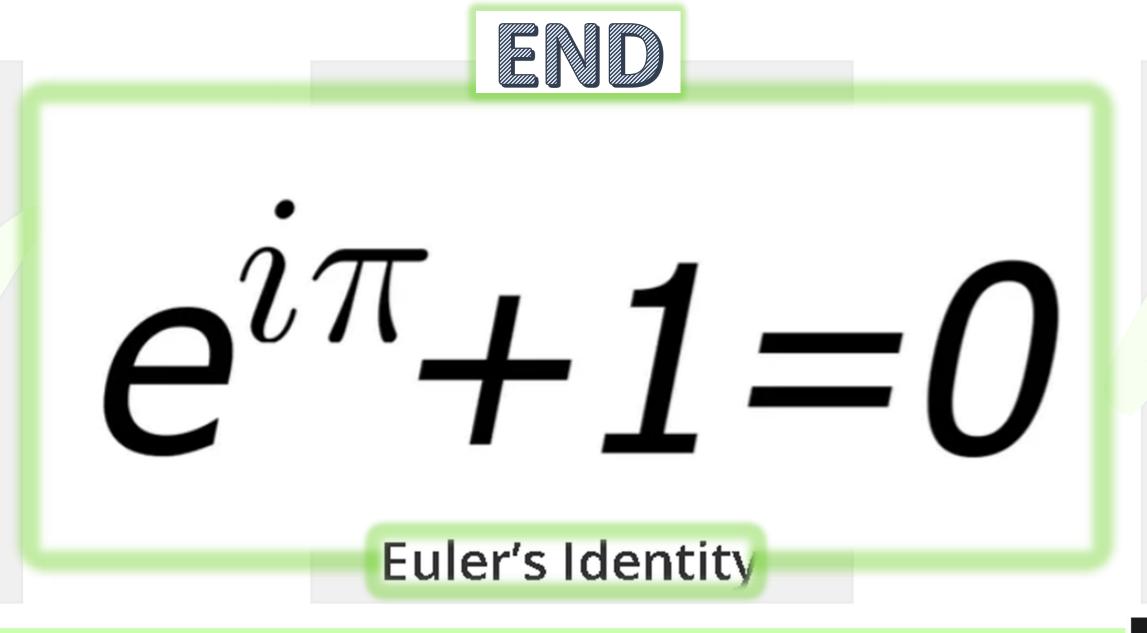
.2.3 
$$\frac{25^{-x}.15^{x+1}}{3^x.5^{-x}}$$

$$= \frac{(s^{2})^{-\chi} (s \times z)^{\chi + 1}}{z^{3} (s \times z)^{\chi + 1}}$$

$$= \frac{s^{-\omega} (s \times z)^{\chi + 1} (s^{-2})^{\chi + 1}}{z^{3} (s^{-2})^{\chi + 1} (s^{-2})^{\chi + 1 + 1}}$$

$$= \frac{s^{1} (s^{-2})^{\chi + 1 + 1} (s^{-2})^{\chi + 1 + 1}}{z^{\chi + 1 + 1}}$$









- 1. FET CAPS DOCUMENT
- 2. GRADE 10 EXAMINATION GUIDELINES
- *3. GRADE 10 DBE/NOVEMBER 2015 2018*

