

()

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$$\begin{array}{l} (+) \\ (-) (-) (\end{array}$$

$$\frac{(+) (+)}{(+) (+)} - (+) ($$

$$\frac{\quad}{-} ($$

:

$$- = (-) + (+)$$

:

$$(-) (+) =$$

:

$$(-) (-) = (-) (+)$$

:

$\begin{array}{cccc} & + & = & + & = \\ & \text{Э} & & + & = & - \end{array}$	
$:$	
$\begin{array}{cccc} & \text{Э} & & + & = & + \\ & & & \frac{\quad}{-} & & \frac{\quad}{-} \\ & & & & , & = & + \end{array}$	
$:$	
$\begin{array}{cccc} & & & (& - &) & (& + &) \\ + & \text{Э} & & & = & + & + \end{array}$	
$:$	
$\begin{array}{cccc} & & & \frac{\quad}{-} & = & + & = & - & = \\ - & = & + & + \end{array}$	
$:$	
$- - =$	
$:$	
$\text{Э} = +$	
$:$	

\exists	$= - \sqrt{\quad} +$
:	
\exists	$\underline{\quad} =$
:	

$+ = \sqrt{\quad} \exists$

:

إذا كان $ل = \frac{ت}{ت-1}$ ، $م = \frac{ت-1}{ت+1}$

- + : ٢ ٢ ٢ ٢

إذا كان $ل + ت = م = \frac{٣ + ٤ ت}{٤ - ٣ ت}$

= + :

(+) - = $\sqrt{\quad}$

:

) = $\pi + \pi($

:

+ + =

+ = + =

:

نأثبت أن $ت = 3$ ، $ل = 2$ - ناك إذا

$\square\square\square \quad 1 \quad 1 \quad 4 \quad \left[\frac{16}{9} \right]$

$\square\square\square \quad 1 + 2(2) \quad 1 + 2(4) \quad \left[\frac{16}{9} \right]$

قبـاجـإلـا $\square\square\square 19$:

دح اولل قيببي عكتلارودجلا (2) ، (، 1 تناك إذا $\square\square\square$

$\square\square\square 0 = (2 + 2)(1 + (2 + 2)(1 + 2) + 3$ قلدا عملارودج دجوأف

	<p>اهرافصأ نم نيرفصو ةيقيقح دادعأ امتالماعم ةثلاثلا ةجردلا نم ةيدودح دجوأ $(\frac{3}{2} \text{ اج ت } + 3 \text{ اج }) ، (\text{ اج ت } + \text{ اج })$ امه</p> <p>قبـاجـإل :</p> <p>3س = (س) ق + + +</p>	1
	<p>$(\pi + \pi) = \sqrt{\quad} - =$</p> <p>$\frac{3}{3} =$</p> <p>()</p> <p>()</p> <p>:</p> <p>(+) = ()</p> <p>(+) ()</p> <p>(+)</p>	
	<p>$= \frac{(-) (+)}{(-)}$</p> <p>:</p>	
	<p>$(- \sqrt{\quad})$</p> <p>:</p> <p>(+) =</p> <p>(+) $\sqrt{\quad}$</p> <p>(+) $\sqrt{\quad}$</p>	

$$(\quad + \quad) =$$

:

$$\begin{aligned} & (\quad + \quad) \\ & (\quad + \quad) \end{aligned}$$

$$\omega \quad \omega$$

:

$$= \begin{matrix} \omega & \omega \\ (\omega - \omega -) + (\omega +) : \end{matrix}$$

:

$$\begin{aligned} \exists \omega \omega & = \{ \omega \omega \} \\ & (\quad) \\ & = \omega + \omega + : \quad . \\ & \quad . \\ & (\omega - \omega +) \quad (\omega - \omega +) \end{aligned}$$

:

	$\omega \frac{\sqrt{\quad} + \quad}{\quad} = \omega$ $= \omega -$	
	$\left(\frac{\pi}{\quad} + \frac{\pi}{\quad} \right)$ $\left(\frac{\pi}{\quad} + \frac{\pi}{\quad} \right) \left(\frac{\pi}{\quad} + \frac{\pi}{\quad} \right) :$	
	$\frac{\pi}{\quad} > > + = \frac{\left(\quad + \quad \right)}{\left(\quad - \quad \right)} =$ $- = \quad =$ $\quad = \quad =$	
	$\frac{\left(\quad + \quad \right)}{\left(\quad \sqrt{\quad} + \quad \right)} =$ $\left(\quad + \quad \right) =$	

=

$$\omega \quad \omega \quad : \quad \sqrt{-} \quad - \quad \sqrt{+} \quad -$$

. -

$$- \sqrt{-} \quad - \quad - \quad : \quad \left(\frac{\pi}{-} \quad + \frac{\pi}{-} \right) = -$$

$$- \sqrt{-}$$

$$\frac{\pi}{-} \quad + \frac{\pi}{-} = \frac{\pi}{-} \quad + \frac{\pi}{-} =$$

$$\left(\frac{\pi}{-} \right)$$

$$\frac{\pi}{-} = \theta \quad : \quad =$$

$$\cdot \quad \left(\sqrt{+} \quad - \right) =$$

$$:$$

$$\left(\quad + \quad \right) =$$

$$\left(\quad + \quad \right) \sqrt{\xi}$$

$$\left(\quad + \quad \right) \sqrt{\xi}$$

$$\left(\quad + \quad \right) \sqrt{\xi}$$

$$\left(\quad + \quad \right) \sqrt{\xi}$$

$$\varepsilon =$$

:

$$\left\{ \frac{\quad}{\sqrt{\quad}} + \frac{\quad}{\sqrt{\quad}} - \frac{\quad}{\sqrt{\quad}} - \frac{\quad}{\sqrt{\quad}} \right\} = .$$

$$- = = (+) + (-) = (\bar{\quad})$$

:

$$\left(\frac{\pi}{\quad} + \frac{\pi}{\quad} \right) = \sqrt{\quad} + =$$

$$(\quad) \quad (\quad)$$

:

$$\left(\quad + \quad \right) = \frac{\quad}{\quad} \left(\quad \right)$$

$$\left(\quad + \quad \right) \sqrt{\quad} \left(\quad \right) \left(\quad \right)$$

$$\left(\quad + \quad \right) \sqrt{\quad} \left(\quad \right)$$

$$\left(\quad + \quad \right) \sqrt{\quad} \left(\quad \right)$$

$$- = (+) + (-) ($$

:

$$- - =$$

$$\left(\frac{-}{\omega} - - \omega \right) = \left(\frac{-}{\omega} - - \omega \right) =$$

=

:

$$+ (- \sqrt{ })$$

:

$$\times + - = (\sqrt{ })$$

$$- = \sqrt{ }$$

:

$$- \pi + \pi =$$

$$\frac{\omega +}{+ \omega} = \frac{}{\omega} - = \frac{}{\omega} + \omega =$$

$$(+ +)$$

:

()

$$= + - + - .$$

$$+$$

:

{ - + }

$$\sqrt{-} = \frac{}{(-)}$$

:

.. ..

.. ..

$$(\circ + \circ) \sqrt{\quad} \quad - =$$

$$- =$$

$$+ = - \quad - =$$

.

$$+ = - \quad - =$$

o

—

-

o

- -

$${}^2 (\quad + \quad) = {}^2 + {}^2$$

$$= + + {}^2 \quad {}^2 \omega$$

$\omega^3 = \omega^4$ لكل $m \in \mathbb{N}$ (ن مجموعة الأعداد النسبية)

$${}^2 \omega^i = \frac{i}{\omega}$$

$$= + \quad (-)$$

$$(+) \quad (-)$$

$$= (\omega +) (\omega +)$$

$$\sqrt{\pm} = \omega - \omega$$

$$= (\omega +) (\omega +) (\omega +) (\omega +)$$

$$= + + + \quad \omega$$

		$= - \sqrt{\quad} + =$
		$= + - \frac{\quad}{-} = +$
		$\frac{\quad}{\quad} + \frac{\quad}{\quad} = - - =$
		$\frac{\quad}{\quad} + = \frac{\quad}{-} =$
		$= \frac{(\quad + \quad)(\quad + \quad)}{(\quad + \quad)}$
		$\varepsilon(\quad + \quad)$



$$= (\quad) (+) (-) = + ()$$

()		()	
(-)		(-)	

$$= (-) ()$$

-		-	
-		+	

$$= ((-) + (-)) = + ()$$

o		o	
o		o	

$$\omega + = ()$$

{ ω - }		{ ω }	
{ ω + }		{ ω - ω }	

$$\sqrt{\pm} ()$$

ω + ω		ω - ω	
$\frac{\quad}{\omega} - \frac{\quad}{\omega}$		$\frac{\quad}{\omega} - \frac{\quad}{\omega}$	

$$- \frac{+ \quad \omega + \quad \omega}{+ \quad \omega + \quad \omega} \quad ()$$

$\omega -$		ω	
-			

$$+ \quad \omega + \quad + \quad \omega \quad ()$$

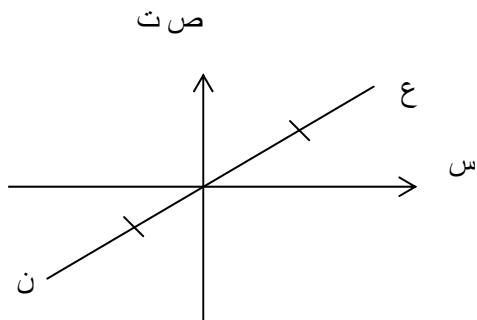
		-	

$$= (\quad \omega - \quad \omega + \quad) \quad ()$$

-			
-			

$$= + \quad ()$$

{ }		{ - }	
{ - }		{ }	



$$\quad ()$$

-		-	
-			

$$- = ()$$

°		°	
°		°	

$$-\sqrt{\quad} = ()$$

-		-	

$$()$$

	$\frac{\theta +}{\theta -}$	
	$\frac{\theta - \theta}{(\theta - \theta)} \left(\frac{\theta + \theta}{(\theta + \theta)} \right) \left(\frac{\theta + \theta}{(\theta + \theta)} \right) \left(\frac{\theta + \theta}{(\theta + \theta)} \right)$	
	$= \left(\frac{+}{-} \right)$	
	$\left(- \right) \left(- \right) \left(- \right) \left(- \right)$	
	$\left(- \right) \left(- \right) \left(- \right) \left(- \right)$	
	$:$	
	$: \left(- \right)$	
	$\left(\frac{\pi}{\pi} \right) \left(\pi \right) \left(\pi \right)$	

:

$$\frac{\pi}{\omega} \left(\frac{\pi}{\omega} \left(\pi \left(\right) \right) \right)$$

:

$$\omega \quad \varepsilon \quad = \quad + \quad \text{r}$$

:

$$\left\{ \omega - \omega - \right\} \left(\left\{ \omega - \omega - - \right\} \left(\left\{ \omega \quad \omega \right\} \left(\left\{ \omega \quad \omega - - \right\} \left(\right) \right) \right) \right)$$

$$\left(\right) \varepsilon \quad \overline{\quad} \quad + \quad =$$

$$- \frac{\quad}{\quad} \left(- \left(+ \overline{\quad} + \left(- \overline{\quad} - \left(\right) \right) \right) \right)$$

$$= \left(\right) \varepsilon \quad + \quad = \left(+ \right) \left(- \right) \left(\right) \left(\right) \left(- \right) \left(- \right) \left(- \right) \left(\right)$$

$$= \frac{\left(- \right)}{\quad}$$

$$- \left(\left(- \left(\right) \right) \right)$$

$$= \left(\omega - \omega \right) \left(\right) \left(- \left(\omega \quad \omega \right) \left(\right) \right)$$

$$\begin{aligned} & \left(\frac{\pi}{\omega} + \frac{\pi}{\omega} \right) \left(\frac{\pi}{\omega} + \frac{\pi}{\omega} \right) \left(\frac{\pi}{\omega} + \frac{\pi}{\omega} \right) \left(\frac{\pi}{\omega} + \frac{\pi}{\omega} \right) \\ & \left(\frac{\pi}{\omega} + \frac{\pi}{\omega} \right) \left(\frac{\pi}{\omega} + \frac{\pi}{\omega} \right) \left(\frac{\pi}{\omega} + \frac{\pi}{\omega} \right) \left(\frac{\pi}{\omega} + \frac{\pi}{\omega} \right) \end{aligned}$$

	$= \left(\frac{\pi}{\quad} + \frac{\pi}{\quad} + \right) =$ $\left(\quad \left(\quad - \left(\quad \left(\right) \right) \right) \right)$	
	$\frac{-}{\quad} = \frac{-}{\quad}$ $\left(\quad \left(\quad \left(\quad - \left(\quad \right) \right) \right) \right)$	
	$= + \left(\quad = - \left(\quad = + \left(\quad = - \left(\quad \right) \right) \right) \right)$	
	$\left(\quad - \left(\quad \left(\quad - \left(\quad \right) \right) \right) \right) = \left(- \right)$	
	$= + \frac{\pi}{\quad} + \frac{\pi}{\quad} \left(\quad \right)$ $\frac{\pi}{\quad} + \frac{\pi}{\quad} \left(\quad \right)$ $\frac{\pi}{\quad} + \frac{\pi}{\quad} \left(\quad \right)$ $\frac{\pi}{\quad} + \frac{\pi}{\quad} \left(\quad \right)$	
	$\frac{-}{\quad} \left(\quad \frac{+}{\quad} \right) = \frac{-}{\quad} \left(\quad \frac{+}{\quad} \right)$ $\frac{-}{\quad} \left(\quad \frac{+}{\quad} \right) = \frac{-}{\quad} \left(\quad \frac{+}{\quad} \right)$	

$$\frac{-\sqrt{\quad}}{\quad}$$

$$\frac{\pi}{\quad} ($$

$$\frac{\pi}{\quad} ($$

$$\frac{\pi}{\quad} ($$

$$\frac{\pi}{\quad} ($$

w w

$$= \left(\frac{\mathbf{W} - \mathbf{w}}{\mathbf{w}} \right) (\mathbf{w} - \mathbf{w})$$

$$- ($$

$$($$

$$- ($$

$$($$



[]	[]	
$\frac{-}{-} = + =$		
+		ع : و =
		ع : و =
		ع : و =
-		
+		
-		

[]	[]	
$+ = + =$		
-		= +
		=
		= +
-		$\frac{\times}{+}$

[]	[]	
$(\text{ }^\circ - \text{ }^\circ) =$		
($\text{ }^\circ + \text{ }^\circ$)		
($\text{ }^\circ + \text{ }^\circ$)		
($\text{ }^\circ + \text{ }^\circ$)		= ($\text{ }^\circ - \text{ }^\circ$)
($\text{ }^\circ + \text{ }^\circ$)		
($\text{ }^\circ + \text{ }^\circ$)		

	<p>(</p> <p>(</p> <p>(</p> <p>- (</p> <p>- (</p>	<p>(+) (+) (-)</p> <p>($\frac{\quad}{w}$ +)</p> <p>$\frac{\quad}{\quad} - \frac{\quad}{\quad}$</p>	
--	--	--	--