

4. Translate the following into English: I kitea e wai tenei motu? Kua karanga ahau i a ia. Nga hoe o tena poti. He hoiho papai. I konei a Hemi i te wa i tae mai ai te Kawana raua ko te Pihopa. Ma wai e rapu te pukapuka a Hoani? Ka makona a Hori kahore ona hiahia ki te kai. Mehemea kihai i wera toku whare kua noho koe ki konei.

5. Translate the following into Maori:—

Mr. Houston (Bay of Islands) asked the Minister of Justice, Whether his attention has been called to a case reported in the papers of a Maori woman in the Mangonui County having died under the treatment of a *tohunga*, and whether he will take steps to prevent the recurrence of such a case? His object in bringing this question before the Minister was to put a stop, if possible, to the practice carried on among some sections of the Maoris by so-called *tohungas*. When an epidemic occurred these men were the cause of many of the Natives under their charge dying. In his own experience he knew of epidemics that had occurred among the Maoris, and he was aware too that a great many persons had died through these *tohungas*, and he was desirous, therefore, of bringing the matter under the notice of the Minister. As appeared from the question, his object was to prevent the occurrence of anything of the kind in the future; and, in the interests of the Natives, he hoped the Minister would see his way to introduce some stringent measure that would put a stop to the practice of the *tohungas*. Medical officers in several districts had spoken to him on the matter. They said that the interference of these men rendered their action null and void when they took the patients in hand. He trusted, therefore, the Minister of Justice would put a stop to the practices of the *tohunga*.

Mr. T. THOMPSON (Minister of Justice) said that on first reading the question he thought the honourable member had laid a large contract before him, but he understood what the honourable gentleman meant. There was a difficulty in dealing with Natives, who adhered to their primitive mode of treatment of the sick. In the particular case mentioned by the honourable member he might say that an inquest was being held, and steps would be taken through the Courts to proceed against the *tohunga* for causing the death of the woman.

6. Translate into English: I mua noa atu i noho he kingi pai ki tetahi wahi o Ahia. He nui tona aroha ki ana tangata, me tona tiaki pai i a ratou, me tona whakaaroaro tonu mo ratou, na reira ka utua atu e ana tangata tona aroha, ki te aroha ano. He roa tona whakahaeretanga i tona kingitanga i runga i te rangimarie, i te ora. Otira tera tetahi o ana hoa tata he toa nui; he nui te ope hoia a taua hoa, he whawhai tonu ki nga kingi katoa i tetahi taha i tetahi taha ona. Katahi ka whakatika mai ki te whawhai ki te kingi pai nei. Ka tu te whawhai nui ka riro herehere te kingi pai. No te ata po i timata ai te riri a ahiahi noa, ka patai ki tetahi kai mana. Ka maua mai e tetahi hoia he pihi miiti mata. Ka mea te kingi, "Me kai mata ahau i te miiti?" Ka mea atu te hoia, "Kaore; tunua ki te ahi na." Ka maka e te kingi te miiti ki runga ki nga waro, a ka tatari marie ki maoa. Taro iti, ka hongia e tetahi kuri te kakara o te miiti, ka haere ma kapohia iho, a oma ana. Pakiri ana te kata a te kingi. Ka ui atu te hoia ki te take i kata ai te kingi, ka ki atu te kingi, "I ki mai aku pononga ki ahau i te ata nei, e kore e taea e nga kamera e rua te waha i aku kai, i te ahiahi nei ka riro i te kuri iti kotahi te mau."

Trigonometry.—For Senior Civil Service. Time allowed: 3 hours.

1. What is meant by the complement and what by the supplement of an angle?

Write down the complements of 15° and 150° , and express them in circular measure. Write down the supplements of $\frac{\pi}{4}$ and $\frac{3}{2}\pi$, and express them in degrees. Express in degrees the complement of the angle whose circular measure is 0.35.

2. Find the numerical values of the trigonometrical ratios of 30° .

If $\tan A = \frac{1}{2}$, find the values of the other trigonometrical ratios of A.

Show that $\frac{\sin \frac{1}{2}\pi - \sin \frac{1}{3}\pi}{\sin \frac{1}{2}\pi + \sin \frac{1}{3}\pi} = (\sec \frac{1}{2}\pi - \tan \frac{1}{2}\pi)^2$.

3. Find an expression for $\cos (A+B)$ by a geometrical construction, and hence deduce expressions for $\sin (A+B)$ and $\cos 3A$.

4. Prove the following relations:—

$$(a.) \quad \cos (A+B) \cdot \cos (A-B) = \cos^2 A - \sin^2 B$$

$$(b.) \quad 1 + \tan 2A \cdot \tan A = \sec 2A$$

$$(c.) \quad \frac{\sin^2 A - \sin^2 B}{\sin A \cdot \cos A - \sin B \cos B} = \tan (A+B).$$

5. If $\tan^2 A - 4 \cos^2 A = 2$, find the general value of A.

6. A being an angle of a triangle, find expressions for $\cos A$ and $\cos \frac{1}{2}A$ in terms of the sides. Show, also, that in any triangle—

$$(a.) \quad \tan B (a - b \cos C) = b \cdot \sin C$$

$$(b.) \quad \cot A \cdot \cot B + \cot A \cdot \cot C + \cot B \cdot \cot C = 1.$$

7. Define a logarithm, and prove that $\log \frac{a}{b} = \log a - \log b$.

Given $\log 2 = 0.301$ and $\log 3 = 0.477$, find $\log 2.4$, $\log 0.018$, $L \sin 45^\circ$, and $L \tan 60^\circ$.

8. An object A is invisible from B; but a surveyor measures a base line BC of 6 chains and finds the angle BCA to be 120° . Going on 10 chains further in the same direction to a point D he finds the angle BDA to be 30° . Determine the distance between A and B.

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