84616

Republic of the Philippines
Department of Education
REGION XI
SCHOOLS DIVISION OF DIGOS CITY

OFFICE OF THE SCHOOLS DIVISION SUPERINTENDENT
DIVISION MEMORANDUM May 11, 2022
No.287, s. 2022

CONDUCT OF MEETING OF STE AND STEM MATHEMATICS TEACHERS FOR THE NATIONAL SCIENCE AND TECHNOLOGY FAIR 2022 PREPARATIONS

To: Chief, Curriculum Implementation Division
Education Program Supervisor in Mathematics
Education Program Supervisor in Science
Dr. Clarence S. Pillerin – PSDS, Secondary Schools District
Dr. Roger A. Manapol – Secondary School Principal IV, SHSDC
Mrs. Elizabetha R. Bueron – Secondary School Principal II, Digos City NHS
Mr. Eugene C. Sayson – Secondary School Principal I, Matti NHS
Mr. Rogan G. Adanza – Officer In-Charge, Mathematics Dept., Digos City NHS
Identified STE and STEM Mathematics Teachers of Public Schools

1. In accordance with the Department of Education Memorandum No. 038, s. 2020 and the unnumbered Regional Memorandum dated March 6, 2022, re: Regional Science and Technology Fair 2022, this office informs the field on the Conduct of Meeting of STE and STEM Mathematics Teachers for the National Science and Technology Fair 2022 Preparations on Friday, May 13, 2022 at 2:00 PM.

2. The participants of this face-to-face meeting are the following:

No.	Name of Participants	Position / Designation	School / Office
1	Jem Boy B. Cabrella	EPS-Math	CID
2	Luzminda B. Jasmin	EPS-Science	CID
3	Rogan G. Adanza	OIC-Head, Mathematics Department	Digos City NHS
4	Jesmarie Peñol	Teacher III	Digos City NHS
5	Ferlyn Mae S. Depacaquibo	Teacher I	Digos City NHS
6	Gary M. Nugas	Master Teacher I	Digos City NHS
7	Glent Ian T. Delima	Teacher III	Digos City NHS
8	Josette Iris Duldulao	Teacher III	Digos City NHS
9	Ralph D. Lim	Teacher I	Digos City NHS
10	Alden Rhee Degamo	Teacher III	Digos City NHS
11	Jhobelle P. Racho	Teacher III	Digos City NHS
12	Venecar C. Abella	Teacher II	Matti NHS
13	John Silver B. Pacificar	Teacher I	Matti NHS
14	Juner O. Gultiano	Teacher III	SHS in Digos City

15	Mildred T. Mirabueno	Teacher II	SHS in Digos City
16	Mary Cris F. Sampaga	Teacher II	SHS in Digos City
17	Ana Marie L. Cabigas	Teacher II	SHS in Digos City

3. The venue of this meeting shall be at the Digos City National High School AVR.

4. Attached herewith is the unnumbered Regional Memorandum, re: Regional Science and Technology Fair 2022.

5. Travel and other incidental expenses of attendees from the schools identified and from the division incurred in attendance to this face-to-face meeting shall be charged against school/division funds and other local funds subject to the usual accounting and auditing rules and regulations.

6. Immediate dissemination of this Memorandum is desired.

CRISTY C. EPE
Schools Division Superintendent

DepEd Schools Division of Digos City
RECORDS SECTION
RELEASED
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DATE: MAY 12 2022 TIME: 4:03PM
BY:

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Republic of the Philippines

Department of Education

DAVAO REGION

Office of the Regional Director

MEMORANDUM

To : Schools Division Superintendents

Subject: REGIONAL SCIENCE AND TECHNOLOGY FAIR 2022

Date : May 6, 2022

In accordance with Department of Education Memorandum No. 038, s. 2020 entitled "National Science and Technology Fair 2022," the Department of Education Region XI Office, through the Curriculum and Learning Management Division (CLMD), announces the conduct of the *Regional Science and Technology Fair (RSTF) for School Year (SY) 2021-2022* with the theme, *Expanding the Horizon: Futures of STEM* which is open to all secondary schools from both public and private schools across divisions in Davao Region using a hybrid modality in collaboration with the Schools Division Offices and partners.

This year's RSTF continues to empower learners and foster innovation and creativity in the face of global change. The RSTF also intends to demonstrate the learners' competency in addressing community challenges for long-term development and to maximize their potential as inquisitive and creative problem solvers.

The RSTF 2022 will banner the following competitions and special event

a. *Siyensikula* – an Original Video Creation Competition
b. *Likha* – A Research Proposal Competition
c. *#SteMTokperiments* – a Tiktok Science Experiment Competition
d. *Robotics Game Exhbition*

The documents below are enclosed for the information and guidance of all concerned.

Enclosures	Title
1	Timeline of Activities
2	Siyensikula-Mechanics
3	Siyensikula-Rubric Evaluation Tool
4	Siyensikula Waiver and Certification
5	Likha - Mechanics and Criteria
6	Likha - Rubric Evaluation Tool (Screening)
7	Likha - Rubric Evaluation Tool (Final Judging)
8	Likha - Project Proposal Template
9	#STEMTokperiments - Mechanics and Criteria

Republic of the Philippines

Department of Education

DAVAO REGION

Office of the Regional Director

This Office reiterates that all participants shall observe minimum health standard and safety protocols for prevention and control of COVID-19.

Meals of the management team, members of the technical working group, board of judges, honoraria of the board of judges, non-DepEd resource Speaker/s, and prizes for the winning entries, and other expenses related to the conduct of the RSTF 2020 shall be charged to regional and downloaded funds, whereas travel and other incidental expenses of the management team and members of the technical working geoup, and expenses related to video production including notarial services, communication allowance of the learners/coach, etc. shall be charged to local funds of the school/Schools Division Offices (SDOs), subject to the usual accounting and auditing rules and regulations.

For more information, please contact **Dr. Maria Liza I. Berandoy**, Education Program Supervisor, Curriculum and Learning Management Division, Department of Education Region XI Office, F. Torres Street, Davao City through email at rstfroxi@deped.gov.ph or telephone number (082) 2222653.

Immediate and wide dissemination of this Memorandum is desired.

ALLAN G. FARNAZO
Director III

Enclosed: As stated

ROC6/mlib

DEPARTMENT OF EDUCATION RO
RECORDS SECTION
RELEASED
By:
Date: 06/2022 Time: 3:02
0522 - 2910

Address: F. Torres St., Davao City (8000)
Telephone Nos.: (082) 291-1665; (082) 221-6147

Enclosure 1

Timeline of Activities

Activities	Date	Person In-Charge
Pre-Planning Conference	June 21, 2022	Members of the TWG
Submission of Top 2 Entries per Event and per Division with Complete Attachment	June 25, 28, 29, 2022	Maria Liza I. Berandoy, CLMD Office @ rstfroxi@deped.gov.ph
Preliminary Screening of Submitted Entries	June 30 – July 1, 2022	Regional Scientific Review Committee (RSRC)
Judging of the Approved Submitted Entries	July 4-6, 2022	Board of Judges Secretariat
Regional Science and Technology Fair Culmination Program and Awarding Ceremony	July 7-8, 2022	CLMD TWG Secretariat Division Science and Math Supervisors Participants
Post Conference	July 11, 2022	TWG RSRC Secretariat
Critiquing and Enhancing of the Winning Entries	July 12-13, 2022	TWG RSRC
Submission of Entries to the NSTF	July 14, 2022	Maria Liza I. Berandoy, CLMD Office

Enclosure 2

SIYENSIKULA MECHANICS

1. This competition is open to all Junior and Senior High School students from both Public and Private Schools in the country. A maximum of three (3) students may collaborate on a single video entry. Collaboration of the participants and coaching may be done remotely such as, but not limited to, online meetings, email messaging, and all available online collaboration platforms.

2. The participant/s must discuss a difficult topic under Physical Sciences, Life Sciences, Mathematics, or an Engineering concept in a clear, creative, and engaging manner through a video presentation that is not more than three (3) minutes. The participants can discuss the topic in English and/or Filipino.

3. All contents in the video must be original and are owned by the participant/s. Entries may include personal experiences and thoughtful observations. Videos must reflect that the student has carefully r viewed and examined the topic.

4. All creative visual tools such as animations, simulations, physical demonstrations, or visual aids are allowed. Entries with photos and videos which are derivative works will automatically be disqualified.

5. Each division may send a **maximum of two (2) official entries** to the Regional Siyensikula Competition. They shall be properly endorsed by the Schools Division Superintendent through an endorsement letter which must be submitted in one of the following dates: June 25, 28, & 29, 2022.

6. Entries must be submitted via email at rstfxi@deped.gov.ph following this subject format: "SIYENSIKULA_DIVISION_VideoTitle" (ex. SIYENSIKULA_TAGUM CITY_Ligtas).

7. The email should include: (1) the name of the participant, (2) a YouTube video link attachment of the video entry, and (3) a PDF file of the video script along with the references in the Chicago Manual of Style. Non-submission of any of the required documents for the competition category will automatically be disqualified.

8. There will be two (2) stages in the judging process:

   a. PEER-TO-PEER REVIEW - The Peer-to-Peer Review is the first phase of judging. Entries will be reviewed and scored by at least five (5) other contestants. The Peer-to-Peer review process is an educational experience and

desires with good faith in providing an honest and sincere assessment for each entry. The contest committee will assign peers who will review the entries of other contestants. The project with the highest score will receive a special award. The criteria for judging are found in Enclosure No. 3.

b. EVALUATION AND SELECTION COMMITTEE REVIEW - The Evaluation and Selection Committee will review and score all the video entries based on the criteria for judging found in Enclosure No. 3.

9. The evaluation results of the Evaluation and Selection Committee are **independent** of the results of the Peer-to-Peer Evaluation. The entry with the highest percentage in the final stage shall be declared as Champion and will be given a medal and a certificate.

10. All the winning entries will receive certificates and will be posted on the official Facebook page of the Regional Science and Technology Fair and DepEd Region XI with the permission and proper acknowledgment of the creators/participants. Participants must submit a duly notarized Certification (Enclosure No. 4).

Enclosure 3

Siyensikula – Rubric Evaluation Tool						
Entry No.						
Criteria	Points					
	0	1	2	3	4	5
Engagement	**Failed to** establish engagement and did not **hold viewer's** attention.	Somewhat interesting but did not hold viewer's attention for the entire length of the video.	**Fairly** interesting and held viewer's attention for the entire length of the video.	Interesting and engaged **the viewer** throughout run of the video.	Very interesting and throughout the video, **viewer was** excited to **see what** would come next.	Captivating and made the viewer want to watch other videos made by the entrant.
Illumination	Failed to explain the subject matter clearly; video did not help **viewer** understand subject matter.	Explanation was at times confusing, and viewer was not able to understand much of the subject matter.	Explanation was fairly clear but covered only general concepts.	Explanatio n was clear and covered some topics beyond general concepts.	Explanation was very clear and covered many topics beyond general concepts.	**Viewer was** able to fully understand the explanation, and video provided a deep dive into the intricacies of the subject matter.
Creativity	No elements of the video demon trat ed a creative approach to explaining the subject matter.	**The** explanation **was** standard and contained one or two resourceful elements.	Parts of the video used creative approaches that made those parts of the explanation stronger.	Many parts of the video took an unorthodox approach to explaining the subject matter, which made the overall explanation stronger.	The entrant **implemente** d d a creative approach throughout the entire video that helped the viewer understand the subject matter.	Video provided an inventive approach that should be used to teach this subject matter.

Difficulty	Subject matter is typically covered at the elementary school level.	Subject matter is typically covered at the junior high school level.	Subject matter is typically covered at the senior high school level.	Subject matter is typically covered at the senior high school level but the video **expands** upon more **complex** areas of the subject matter.	Subject matter is typically covered at the advanced senior high school level or early college level.	Subject matter is typically covered at the advanced college level or higher.
Total (Maximum of 20 points)						

Enclosure 4

CERTIFICATION

KNOWN ALL MEN BY THESE PRESENTS:

That I/We _____ of _____ writer/s in the _____ hereby certify that our entry is of our own, and is new and original to the best of our knowledge. I/We further certify that we give our permission for DepEd – Bureau of Curriculum Development to share the said Videos as supplemental learning materials to be used in the classrooms.

IN WITNESS WHEREOF, I/We have hereunto set our hands on this ____day of _____, 2022 at _____.

_____ Witness

_____ Witness

SUBSCRIBED AND SWORN TO before me this _____ day of _____ 2021, at _____, Philippines, affiant_____, exhibiting his proof of identity as above stated.

Doc. No.:_____
Page No.:_____
Book No.:_____
Series of 2022

Note: Please submit this form together with your entries on or before the Deadline of submission.

Enclosure 5

Likha - A Full Proposal Research Competition

MECHANICS AND CRITERIA

1. This competition is open to all Grade 9-12 students from both Public and Private Schools in the country.

2. The first-place winners at the division level shall represent the region to the Regional STF competition as approved by the Screening Committee. Only two (2) entries are allowed per category per division.

3. The four (4) major categories are Life Science, Physical Science, Robotics and Intelligent Machines, and Mathematics and Computational Sciences.

Category	Life Science	Physical Science	Robotics and Intelligent Machines	Mathematics and Computational Sciences
	Individual	Individual	Individual	Individual
	Team	Team	Team	Team

4. The official entries to the Regional Level *Likha* Competition should be properly endorsed by the Schools Division Superintendent through an endorsement letter which must be submitted in one of the following dates: June 25, 28, & 29, 2022.

5. Entries must be submitted via email at rstfxi@deped.gov.ph following this subject format: "LIKHA_DIVISION_CATEGORY" (ex. LIKHA_DAVAO CITY_LS-I).

6. The email should include completely filled-out Project Form (Enclosure 5) and other relevant files in PDF format. Incomplete submission of the required documents may disqualify the division entries.

7. DepEd-RSTF Regional Technical Working Committee reserves the right to remove, reject, or disqualify any entry if it infringes, misappropriates, or violates any rights of any third party including, without limitation, patent, copyright, trademark or right of privacy or publicity.

8. The Project Proposal will be screened according to the following criteria:

Criteria	Weight
Originality and Innovation	25%
Technical/Scientific Merit	25%
Community Connection and Impact	25%
Excellence of Method	25%
Total	100%

9. The Project Proposal will be Judged according to the following criteria:

Criteria	Description	Weight
Originality and Innovation	The project provides novel and innovative solutions to issues in the environment	20%
Technical/Scientific Merit	Sound scientific basis to generate new knowledge or apply existing knowledge in an innovative manner	20%
Community Connection and Impact	Outcomes are expected to address the issue or problem identified.	20%
Excellence of Method	Solution and method proposed and cost effective, viable, timely and relevant.	20%
Presentation	Proponent/s provide/s a clear explanation of the facts, theories, thorough understanding of the expected output of the proposal.	20%
Total		100%

10. Project Format Descriptions:

a. **Executive Summary** – a brief discussion about the proposal.

b. **Introduction** – a declaration of the project and its idea and context to explain the goals and objectives to be reached and other relevant information that explains the need for the project and states the aims to describe the amount of work planned for implementation; refers to a simple explanation or depiction of the project that can be used as communication material.

- **Rationale** – a brief analysis of the problems identified related to the project.
- **Significance** – refers to the alignment to national S&T priorities, strategic relevance to national development and addresses current issues and concerns.
- **Scientific Basis** – scientific findings, conclusions or assumptions used as justification for the research.

- **Theoretical Framework** – the structure that summarizes concepts and theories that serve as basis for the data analysis and interpretation of the research data.
- **Objectives** – statements of the general and specific purposes to address the problem areas of the project.

c. **Review of Literature** – refers to the following: (a) related research that have been conducted, state-of-the-art or current technologies from which the project will take off; (b) scientific/technical merit; (c) results of related research conducted by the same Project leader, if any; (d) Prior Art Search, and; (e) other relevant materials.

d. **Methodology** – description of the design and engineering solution proposed to address the problem, the (a) variables or parameters to be measured and evaluated or analyzed; (b) treatments to be used and their layout; (c) experimental procedures and design; (d) statistical analysis; (e) evaluation method and observations to be made, strategies for implementation (Conceptual/ Analytical framework).

e. **Expected Output and Potential Impact** – discusses the possible outcome of the project, the target beneficiaries, socio, and economic impact.

f. **Workplan and Target Deliverables** – indicates the timeline of activities to be accomplished in the conduct of the project.

g. **References** – list of reference materials such as journals, designs and patents, and online sources. It should follow Chicago Manual of Style in referencing.

Enclosure 6

LIKHA - RUBRIC EVALUATION TOOL (SCREENING)

CRITERIA	POINT
1. Originality and Innovation (25) 1. Does the project show originality and innovation in terms of: a. proposed approach in solving the problem? b. research design? c. research methodology? d. construction or design of a new or improved equipment? 2. Did the research project considered an issue/problem/gap that previous research projects did not addressed? 3. Does the project transforms an idea or solution into a creative, unique and major improvement in the current technology/process/product/technique/design?	
2. a. Technical/Scientific Merit (25) (If an engineering project, please see 2b. Engineering Goals.) 1. Is the problem stated explicitly and concisely? 2. Was the approach to solve the problem supported by relevant, critical and logical related literatures (scientific basis/theoretical framework/mathematical theory)? 3. Did the finalist/team cite sufficient number of credible related literatures to provide a solid understanding and pre-requisite information for readers to better understand the research project? 4. Does the finalist/team recognize the projects' limitations? 5. Does the analysis of backgound information with depth? b. Engineering Goals 1. Does the project have a clear objective? 2. Is the objective relevant to the potential user's needs? 3. Is the solution: workable? Acceptable to the potential user? Economically feasible? 4. Could the solution be utilized successfully in design or construction of an end product? 5. Is the solution a significant improvement over previous alternatives or application? 6. Will the solution be tested for performances under standardized protocols?	
3. Community Connection and Impact (25) 1. Did the project addressed a relevant research issue? (e. g. food safety, water conservation, cyber security, traffic/road congestion, health, disaster mitigation, agriculture and environment and others) 2. Did the student clearly defined the extent on how the research project can potentially benefit and meet the needs of the society? 3. Does the proposed solution gives value, effectiveness and efficiency to their target sector?	
4. Excellence of Method (25) 1. Was the research methods supported by relevant and credible related literatures? 2. Was there an efficient, thorough, valid and reliable procedural plan to attain the research objectives? 3. Are the variables clearly identified and defined? 4. If controls were necessary, did the student recognize their need and will be used correctly? For the extraneous variables, did the student identified methods on how to control such variables? 5. Does the critical elements (e. g. treatments, techniques, protocols, replications, trials) of the research design and methods appropriately developed? 6. Does the project specifically and clearly explained what and how quantitave and qualitative data will be collected? 7. Does the project recognize ethical or safety issues and has adequate plans to manage risks? 8. Does the project include appropriate protocols/procedures for waste disposal and data analysis? 9. Is the proposed timeline/workplan appropriate, achievable, practical and feasible?	
TOTAL	
Signature over printed name of the evaluator	

Enclosure 7

LIKHA - RUBRIC EVALUATION TOOL (FINAL JUDGING)

CRITERIA	POINT
1. Originality and Innovation (20) 1. Does the project show originality and innovation in terms of: a. proposed approach in solving the problem? b. research design? c. research methodology? d. construction or design of a new or improved equipment? 2. Did the research project considered an issue/problem/gap that previous research projects did not addressed? 3. Does the project transforms an idea or solution into a creative, unique and major improvement in the current technology/process/product/technique/design?	
2. a. Technical/Scientific Merit (20) (If an engineering project, please see 2b. Engineering Goals.) 1. Is the problem stated explicitly and concisely? 2. Was the approach to solve the problem supported by relevant, critical and logical related literatures (scientific basis/theoretical framework/mathematical theory)? 3. Did the finalist/team cite sufficient number of credible related literatures to provide a solid understanding and pre-requisite information for readers to better understand the research project? 4. Does the finalist/team recognize the projects' limitations? 5. Does the analysis of background information with depth? b. Engineering Goals 1. Does the project have a clear objective? 2. Is the objective relevant to the potential user's needs? 3. Is the solution: workable? Acceptable to the potential user? Economically feasible? 4. Could the solution be utilized successfully in design or construction of an end product? 5. Is the solution a significant improvement over previous alternatives or application? 6. Will the solution be tested for performances under standardized protocols?	
3. Community Connection and Impact (20) 1. Did the project addressed a relevant research issue? (e. g. food safety, water conservation, cyber security, traffic/road congestion, health, disaster mitigation, agriculture and environment and others) 2. Did the student clearly defined the extent on how the research project can potentially benefit and meet the needs of the society? 3. Does the proposed solution gives value, effectiveness and efficiency to their target sector?	
4. Excellence of Method (20) 1. Was the research methods supported by relevant and credible related literatures? 2. Was there an efficient, thorough, valid and reliable procedural plan to attain the research objectives? 3. Are the variables clearly identified and defined? 4. If controls were necessary, did the student recognize their need and will be used correctly? For the extraneous variables, did the student identified methods on how to monitor and keep these variables constant? 5. Does the critical elements (e. g. treatments, techniques, protocols, replications, trials) of the research design and methods appropriately developed? 6. Does the project specifically and clearly explained what and how quantitave and qualitative data will be collected? 7. Does the project recognize ethical or safety issues and has adequate plans to manage risks? 8. Does the project include appropriate protocols/procedures for waste disposal and data analysis? 9. Is the proposed timeline/workplan appropriate, achievable, practical and feasible?	
5. Presentation (20) 1. How clearly and concisely does the finalist or team discussed his/her project and explain the rationale and procedures? Watch out of memorized speeches that reflect little understanding of principles. 2. Does the written material reflect the finalist's or team's understanding of the research proposal? 3. Are the important phases of the project presented in an orderly manner? 4. How clearly is the rationale presented? 5. How clearly are the research methods presented? 6. Did the student used presentation resources as guide? 7. Is the presentation professional with the use of colors, fonts and graphics? 8. Did the student speaks clearly, maintains eye contact and uses appropriate scientific language? 9. Did the student provided clear, detailed and accurate answers to the questions given?	
TOTAL	
Signature over printed name of the Judge	

Enclosure 8

LIKHA – PROJECT PROPOSAL TEMPLATE

(1) PROJECT PROFILE
Project Title:_____
Names of Project Proponent/s:_____
Region:_____ Division_____
School:_____ Grade Level:_____
Project Duration (number of months): _____
Email:_____ Contact number:_____

(2) CATEGORY OF RESEARCH
_____ Physical Science
_____ Life Science
_____ Robotics and Intelligent Machines
_____ Mathematics and Computational Sciences

(3)
____Individual
____Team

(4) THEME
_____Food Safety
_____Water Conservation
_____Renewable Energy
_____Cyber Security
_____Traffic / Road Congestion
_____Health
_____Disaster Mitigation
_____Agriculture and Environment
_____Others (please specify)
_____

(5) EXECUTIVE SUMMARY (not to exceed 200 words)

(6) INTRODUCTION

(6.1) RATIONALE/SIGNIFICANCE (not to exceed 300 words)

(6.2) SCIENTIFIC BASIS/THEORETICAL FRAMEWORK/MATHEMATICAL THEORY INVOLVED

(6.3) OBJECTIVES
General:
Specific:

(7) REVIEW OF LITERATURE

(8) METHODOLOGY

(9) EXPECTED OUTPUTS AND POTENTIAL IMPACTS

(10) WORK PLAN AND TARGET DELIVERABLES

(11) REFERENCES

9. Entries must be submitted via email rstfxi@deped.gov.ph with a subject format: "#SCITOKPERIMENTS_DIVISION_ENTRYNO." (ex. "#SCITOKPERIMENTS-DIGOS_Entry No. 1).

10. The email should include: (1) the name/s of the participant/ s; (2) Tiktok video link attachment of the video entry; and (3) a PDF file of the video script along with the references in Chicago Manual of Style. Non-submission of any of the required documents for the competition category will automatically be disqualified.

11. DepEd-NSTF National Technical Working Committee reserves the right to remove, reject, or disqualify any entry if it: (a) violates the terms of service and privacy policy of Tiktok; and (b) infringes, misappropriates, or violates any rights of any third party including, without limitation, patent, copyright, trademark or right of privacy or publicity.

12. Entries submitted to "#SCITOKPERIMENTS do not represent DepEd Region XI and the RSTF Technical Working Group.

13. The Tiktok Video will be judged according to the following criteria:

Criteria	Weight
Originality and Creativity • Video is original, creative, and unique.	30%
Delivery/Execution • Delivery is well planned with smooth transitions and edits. • Ideas are very organized and easily understood. • All sound and visual elements coincide with the video's content.	30%
Accuracy of Content • All information being delivered is accurate and relevant.	40%
Total	100%