

Mathematics Essentials 11

Mental Math

- B1 know the multiplication and division facts
- B2 extend multiplication and division facts to products of tens, hundreds, and thousands by single-digit factors.
- B3 estimate sums and differences
- B4 estimate products and quotients
- B5 mentally calculate 25%, 33 1/3%, and 66 2/3% of quantities compatible with these percents
- B6 estimate percents of quantities

Data Management

- C1 display data in graphs and tables using technology
- F1 reading information
- F2 interpreting graphs
- F3 characteristics of graph
- F4 purpose
- F5 represent given data in a variety of graphical forms, using spreadsheets or other suitable graphing techniques
- F6 select an effective graphical form for a given set of data and explain the reasons for the choice
- F7 draw appropriate conclusions about questions or issues on the basis of the interpretation of graphs
- F8 use data analysis to make predictions of an even occurring
- F9 describe the meaning of the trends within the context of the data

Banking

- A1 understand the variety of bank transactions available and their related fees (teller, on-line, phone, banking machine, or at a retail outlet)
- A2 understand and interpret bank statements and bankbooks
- A3 understand the various savings and investing alternatives

- A4 commonly available
- A4 explore the concepts of risk tolerance vs. reward investing and demonstrate an understanding of how it changes during different life stages
- B7 check the accuracy of a statement of bankbook
- B8 calculating the cost of a loan using amortization tables
- B9 determine the cost of using credit, using technology
- C1 interpreting data from amortization tables
- C2 explore the effects of parameter changes on the cost of borrowing money
- C3 determine the effects of compound interest on deposits made into savings accounts using technology
- C4 explore the growth of savings based on a variety of investment strategies ranging in amounts and time frames using technology

Housing

- A5 understand the rights and responsibilities of landlords and tenants
- B10 calculate the costs associated with renting and apartment or buying a house

Measurement and Design

- D1 demonstrate an understanding of the concept of perimeter and area
- D2 calculate perimeter and area
- D3 estimate perimeter and area using estimation strategies
- D4 use perimeter and area to solve a variety of real world problems
- D5 demonstrate an understanding of volume and surface area
- D6 calculate surface area and volume of rectangular prisms and cylinders
- D7 use surface area and volume to solve real world

- D8 problems
- D8 estimate the volume and surface area using estimation strategies
- D9 calculate scale factors in 2-D scale diagrams and 3-D scale models understand the relationship among the scale factor and the related change in area or volume
- E1 understand the meaning and use of square root numbers when determining the dimensions (sides) of a square
- E2 understand and apply the Pythagorean Theorem
- E3 find the missing side measure in a right angle triangle
- E4 create 2-D scale diagrams and 3-D scale models

Taking a Trip

- A6 understand how to read a map
- B11 determine the expenses related to taking a trip (i.e. gasoline, accommodations, meals, etc.)
- B12 determine distances using scales on a map

GCO A

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- A5 understand the rights and responsibilities of landlords and tenants
- A6 understand how to read a map

GCO B

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- B7 check the accuracy of a statement of bankbook
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- B10 calculate the costs associated with renting and apartment or buying a house
- B11 determine the expenses related to taking a trip (i.e. gasoline, accommodations, meals, etc.)
- B12 determine distances using scales on a map

GCO C

- C1 interpreting data from amortization tables
- C2 explore the effects of parameter changes on the cost of borrowing money
- C3 determine the effects of compound interest on deposits made into savings accounts using technology
- C4 explore the growth of savings based on a variety of investment strategies ranging in amounts and time frames using technology

GCO D

- D1 demonstrate an understanding of the concept of perimeter and area
- D2 calculate perimeter and area
- D3 estimate perimeter and area using estimation strategies
- D4 use perimeter and area to solve a variety of real world problems
- D5 demonstrate an understanding of volume and surface area
- D6 calculate surface area and volume of rectangular prisms and cylinders
- D7 use surface area and volume to solve real world problems
- D8 estimate the volume and surface area using estimation strategies
- D9 calculate scale factors in 2-D scale diagrams and 3-D scale models understand the relationship among the scale factor and the related change in area or volume

GCO E

- E1 understand the meaning and use of square root numbers when determining the dimensions (sides) of a square

- E2 understand and apply the Pythagorean Theorem
- E3 find the missing side measure in a right angle triangle
- E4 create 2-D scale diagrams and 3-D scale models

GCO F

- F1 reading information
- C1 display data in graphs and tables using technology
- F2 interpreting graphs
- F3 characteristics of graph
- F4 purpose
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