End of Term 1

REVISION NOTES

Math

Elite Stream-Sector C

Grade 6

CHAPTER 1

Chapter 1.1 Factors and Multiples

Learning Outcomes		Textbook Page
1	**To find the greatest common factor (GFC) of two or more numbers.**	**7**
2	**To find the least common multiple (LCM) of two or more numbers.**	**7**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

The greatest of the common factors of two or more numbers is called the <u>greatest common factor</u> (GCF)

Example: GCF (16, 24, 40) =

Step 1: Find all the factors of each number.

Factors of 16 are 1, 2, 4, **8**, 16

Factors of 24 are 1, 2, 3, 4, 6, **8**, 12, 24

Factors of 40 are 1, 2, 4, 5, **8**, 10, 20, 40

Step 2: Find the greatest common factor.

The greatest common factor is 8.

Solve: GCF (10, 15, 35) =

The least nonzero number that is a multiple of two or more whole numbers is the <u>least common multiple</u> (LCM) of the numbers.

Example: LCM (5, 6, 10) =

Step 1: Find all the multiples of each number

Multiples of 5 are 5, 10, 15, 20, 25, **30**, 35, …

Multiples of 6 are 6, 12, 18, 24, **30**, 36, 42, …

Multiples of 10 are 10, 20, **30**, 40, 50, …

Step 2: Find the least common multiple.

The least common multiple is 30.

Solve: LCM (2, 3, 12) =

Word Problem: Three shuttle busses leave terminal C at the airport. One leaves terminal C every 6 minutes, one leaves every 8 minutes, and one leaves every 10 minutes. If all 3 just left terminal C, how many minutes will pass before all 3 leave the terminal at the same time again?

https://www.youtube.com/watch?v=XbEQdphfJaI

Chapter 1.2 Ratios

Learning Outcomes		Textbook Page
1	**To write and solve problems involving ratios.**	**19**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

A ratio is a comparison of two quantities by division.

Examples:

a. Write the ratio of hearts to moons in simplest form.

12 hearts to 2 moons = **6 hearts to 1 moon**

b. Write the ratio of moons to total shapes in simplest form.

2 moons to 14 total shapes = **1 moon to 7 total shapes**

c. Shahad wants to divide 33 photos into two groups so the ratio is 4 to 7. How many photos will be in each group?

(We need two numbers that have a sum of 33, but their ratio will simplify to 4:7)

4:7 has a sum of 11, 8:14 has a sum of 22, 12: 21 has a sum of 33, **therefore there will be 12 photos in one group and 21 photos in the other group.**

Solve:

a. Write the ratio of triangles to stars in simplest form.

b. Write the ratio of stars to total shapes in simplest form.

c. Shahad wants to divide her 28 flowers into two groups so that the ratio is 2 to 5. How many flowers will be in each group?

d. Using the table, what is the ratio of hamsters to total pets sold in simplest form.

Pet	Number Sold
Bird	8
Hamster	10
Cat	14

https://www.youtube.com/watch?v=LLNaxctU8JE https://www.youtube.com/watch?v=LBGH-0YV-44

Chapter 1.3 Rates

Learning Outcomes		Textbook Page
1	To write and solve problems involving rates and unit rates	31

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

A rate is a ratio comparing two quantities with different kinds of units.

a. Mzoon reads 2 pages per minute. How many pages will she read in 15 minutes?

$$\frac{\textbf{2 pages}}{\textbf{1 minute}} = \frac{?}{\textbf{15 minutes}}$$

b. Hamad drove 480 kilometers in 4 hours.
Mohamed drove 550 kilometers in 5 hours.
Who is driving at a faster rate? How much faster?

Hamad **Mohamed** **Compare**

a. An adult's heart beats 2000 times every 30 minutes.
A baby's heart beats 2400 times every 20 minutes.
How many more times does a baby's heartbeat in 60 minutes than an adult's heart?

Adult **Baby** **Compare**

A unit rate has a denominator of 1 unit when the rate is written as a fraction.

a. Amna downloaded 42 songs in 7 minutes. How many songs did she download per minute?

$$\frac{\textbf{42 songs}}{\textbf{7 minutes}} = \frac{?}{\textbf{1 minute}}$$

b. Reem picked 60 oranges in 5 minutes. Write this rate as a unit rate.

Chapter 1.4 Ratio Tables

Learning Outcomes		Textbook Page
1	To solve problems using ratio tables	39

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

Lesson 4: Ratio Tables

A ratio table is filled with pairs of numbers that have the same ratio.

1. a. Salama earns AED 600 in 4 hours. Use this information to complete the ratio table below.

Hours	1			4	
Money (AED)				600	

c. At this rate, how much money will Salama earn in 40 hours?

2. Shahad exchanged $100 in American dollars and received $120 in Canadian dollars. Use a ratio table to find how many Canadian dollars she would receive for $80 American dollars

American Dollars				
Canadian Dollars				

Equivalent ratios express the same relationship between quantities.

Example: $\frac{10 \text{ pages}}{15 \text{ minutes}} = \frac{20 \text{ pages}}{30 \text{ minutes}}$

Multiplying or dividing two related quantities by the same number is called scaling.

Example: Scaling Forward

$$\frac{10 \bullet 3}{15 \bullet 3} = \frac{30}{45}$$

Scaling Backward

$$\frac{10 \div 5}{15 \div 5} = \frac{2}{3}$$

https://www.youtube.com/watch?v=JwRYcBUGz5Q&spfreload=10
https://www.youtube.com/watch?v=NCseOuCcbsM

Chapter 1.5 Graph Ratio Tables

Learning Outcomes		Textbook Page
1	**To graph and compare ratios tables.**	**47**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

Example: The table shows the total number of kilometers Amna runs for several days. The table also lists this information as ordered pairs (x number of days, y total kilometers).

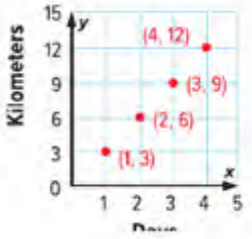
Step 1: Complete the ratio table

Step 2: Graph the ordered pairs

Step 3: Describe the pattern

The total distance is increasing by 3 km per day.

Graph the ordered pairs.



Amna's Running Record		
Days, x	Distance (km), y	(x, y)
1	3	(1, 3)
2	6	(2, 6)
3	9	(3, 9)
4	12	(4, 12)

Solve: Two friends are each saving money in their bank accounts. Hamad saves 5 dirhams per week, and Ali saves 10 dirhams per week.

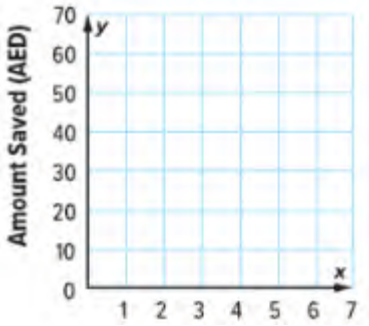
a. Make a table for each friend that shows the total amount saved after 4 weeks.

Hamad		
Weeks, x	Total Saved (AED), y	(x, y)
1		
2		
3		
4		

Ali		
Weeks, x	Total Saved (AED), y	(x, y)
1		
2		
3		
4		

b. Graph the ordered pairs for each friend on the same coordinate plane using two colors.

c. How do the ratios compare?



Chapter 1.6 Equivalent Ratios

Learning Outcomes		Textbook Page
1	**To determine if ratios or rates are equivalent.**	**59**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

Equivalent ratios have the same unit rate.

1. Determine if each pair of rates is equivalent.
   a. 25 miles in 5 hours; 54 miles in 9 hours

$$\frac{25 \text{ miles}}{5 \text{ hours}} = \frac{?}{1 \text{ hour}} \qquad \frac{54 \text{ miles}}{9 \text{ hours}} = \frac{?}{1 \text{ hour}}$$

(Are the unit rates equivalent?)

   b. 3 shirts for AED 24; 5 shirts for AED 40.

If the unit rate is not easily found, use equivalent fractions to decide whether the ratios or rates are equivalent.

2. Determine if the pair of ratios or rate is equivalent.
   a. 3 free throws made out of 7 attempts; 9 free throws made out of 14 attempts

$$\frac{3 \text{ free thows made}}{7 \text{ attempts}} \stackrel{?}{=} \frac{9 \; free \; thows \; made}{14 \; attempts}$$

b. 6 DVDs for AED 70; 3 DVDs for AED 35

Word Problem: On a math test, it took Khalifa 30 minutes to do 6 problems. Hassan finished 18 problems in 40 minutes. Did the students work at the same rate? Explain your reasoning.

Chapter 1.7 Ratio and Rate Problems

Learning Outcomes		Textbook Page
1	**To solve ratio and rate problems.**	**71**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

1. Out of 30 students surveyed, 17 have a car. Based on these results, predict how many students out of the 300 students in the school have a car.

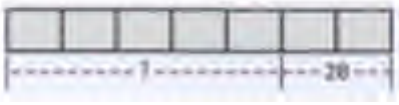
$$\frac{\text{part}}{\text{whole}} = \frac{17 \text{ have a car}}{30 \text{ students surveyed}} = \frac{? \text{ have a car}}{300 \text{ students in the school}}$$

2. In one out of every 12 students at a school share a locker, how many share a locker in a school of 456 students?

3. Shahad takes 4 breaths every 10 seconds during yoga. At this rate, about how many breaths would she take in 2 minutes?

4. There are 810 calories in 3 scoops of vanilla ice cream. How many calories are there in 7 scoops of ice cream?

5. **Abdul read** $\frac{5}{7}$ of the pages in his book. He has **28** pages left to read. How many pages did he read already?



CHAPTER 2

Chapter 5.7 Partial Fractions

Chapter 2.1 – 2.4 Decimals, Fractions, Mixed Numbers and Percents

Learning Outcomes		Textbook Page
1	To write rational numbers as fractions or mixed numbers, decimals, and percents.	89 - 128

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

Examples:

Decimal to Fraction or Mixed Number in Simplest Form

1. $1.4 = 1\frac{4}{10} = 1\frac{2}{5}$ (If there is 1 decimal place, then divide the number by 10)
2. $2.44 = 2\frac{44}{100} = 2\frac{11}{25}$ (If there are 2 decimal places, then divide the number by 100)
3. $0.444 = \frac{444}{1000} = \frac{111}{250}$ (If there are 3 decimal places, then divide the number by 1000)

Fraction or Mixed Number to Decimal

Write the fraction with a denominator that is a factor of 10, 100, or 1000.

1. $\frac{2}{5} = \frac{4}{10} = 0.4$
2. $\frac{2}{20} = \frac{10}{100} = 0.10$ or 0.1
3. $2\frac{4}{500} = 2\frac{8}{1000} = 2.008$

Percent to Fraction or Mixed Number in Simplest Form

A <u>percent</u> is a ratio that compares a number to 100.

1. $50\% = \frac{50}{100} = \frac{1}{2}$
2. $450\% = \frac{450}{100} = 4\frac{1}{2}$
3. $0.4 = \frac{0.4}{100} = \frac{4}{1000} = \frac{1}{250}$

Fraction or Mixed Number to Percent

Write an equivalent ratio in which the denominator is 100. Then, the number can be written as a percent.

1. $\frac{4}{25} = \frac{16}{100} = 16\%$
2. $\frac{12}{40} = \frac{3}{10} = \frac{30}{100} = 30\%$
3. $1\frac{1}{4} = \frac{5}{4} = \frac{125}{100} = 125\%$

Percent to Fraction, then Decimal

Write the percent as a fraction, then as a decimal by moving the decimal point two places to the left.

1. 38% = $\frac{38}{100}$ = 0.38
2. 0.05% = $\frac{0.05}{100}$ = 0.0005
3. 275% = $\frac{275}{100}$ = 2.75

Decimal to Fraction, then Percent

1. 0.36 = $\frac{36}{100}$ = 36%
2. 4.05 = $\frac{405}{100}$ = 405%
3. 0.004 = $\frac{0.4}{100}$ = 0.4%

Complete the Table. (Use another piece of paper to do the work if necessary.)

Decimals	Fraction or Mixed Number	Percents
0.9		
	$\frac{311}{500}$	
		2%
	$\frac{5}{8}$	
0.425		
	$\frac{19}{25}$	
		220%
		0.005%
	$2\frac{3}{4}$	
3.08		
0.002		
	$\frac{1}{1000}$	

https://www.youtube.com/watch?v=G-MEkt3xbx0 https://www.youtube.com/watch?v=WnTz1KX7Hoc

Chapter 2.5 Compare and Order Fractions, Decimals, and Percents

Learning Outcomes		Textbook Page
1	To compare fractions, decimals and percents.	129

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

Examples:

When comparing fractions;

1. Find the least common multiple (LCM) of the denominators.
2. Write an equivalent fraction for each fraction using the LCM.
3. Compare the numerators.

$\frac{5}{12} \bigcirc \frac{7}{8}$ The LCM of 8 and 12 is 24.

$(\frac{2}{2})\frac{5}{12} \bigcirc \frac{7}{8}(\frac{3}{3})$ Scale each fraction to create common denominators of 24.

$\frac{10}{24} < \frac{21}{24}$ Compare the numerators. 10 < 21

Before comparing numbers, make sure they are all written as the same type of number.

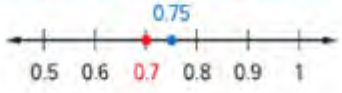
Write both as Decimals **or** **Write both as Fractions**

$\frac{3}{4} \bigcirc 0.7$

$\frac{3}{4} \bigcirc 0.7$ Write the sentence.

$0.75 \bigcirc 0.70$ Write $\frac{3}{4}$ as a decimal. Annex a zero to 0.7.

$0.75 > 0.70$ Compare the hundredths place. 5 > 0



Since 0.75 is to the right of 0.7 on the number line, $\frac{3}{4} > 0.7$.

$\frac{3}{4} \bigcirc 0.7$

$\frac{3}{4} \bigcirc \frac{7}{10} = \frac{15}{20} > \frac{14}{20}$

1. Fill in each ◯ with <, >, or = to make a true statement.

a. $\frac{2}{3} \bigcirc \frac{5}{9}$ b. $\frac{5}{12} \bigcirc \frac{3}{8}$ c. $\frac{1}{6} \bigcirc \frac{5}{18}$

a. $\frac{8}{11} \bigcirc 0.7$ e. $42\% \bigcirc 0.44$ f. $6.5 \bigcirc 650\%$

2. The table shows the average monthly rainfall in winter, in Dubai and Ras al Khaimah

Portion of Rainfall per Month		
Month	**Dubai**	**Ras al Khaimah**
December	$\frac{5}{8}$	58%
January	$\frac{1}{8}$	14%
February	$\frac{2}{4}$	28%

a. Write Dubai's rainfall for December and January as decimals

December **January**

b. Write Ras Al Khaimah's rainfall for December and January as decimals.

December **January**

c. Compare the rainfall in Dubai and Ras al Khaimah for the months of December and January.

Compare December Rainfall **Compare January Rainfall**

https://www.youtube.com/watch?v=5vv--qrUJXo&spfreload=10

Chapter 2.6 to 2.8 Percents

Learning Outcomes		Textbook Page
1	**To estimate with percents.**	**137**
2	**To find the percent of a number.**	**147**
3	**To solve percent problems.**	**155**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

Use compatible numbers when estimating the percent of a number.

1. Estimate 47% of 693
   ≈ 50% of 700 = 350
2. Estimate 19% of 196
   ≈ 20% of 200 = 40

Estimating is a good method for checking if your solution is reasonable.

To find percents of a number, change the percent to a fraction, or decimal, then multiply.

1. What is 20% of 50?

   $\frac{20}{100} \bullet \frac{50}{1} = \frac{1000}{100} = 10$ or $0.2 \bullet 50 = 10$

Use the percent proportion to solve problems involving percents. $\frac{\text{Part (is)}}{\text{Whole (of)}} = \frac{\%}{100}$

The words "is" and "of" can be used to determine which number is the part (is), and which number is the whole (of).

1. 10 is 25% of what number? $\frac{10}{?} = \frac{25}{100}$ => ? = 40, therefore 10 is 25% of 40
2. What is 30% of 80? $\frac{?}{80} = \frac{30}{100}$ => ? = 24, therefore 24 is 30% of 80
3. 10 is what percent of 50. $\frac{10}{50} = \frac{?}{100}$ => ? = 20%, therefore 10 is 20 percent of 50.

Solve

1. Estimate each percent

a. 47% of 77 b. 18% of 43 c. 67% of 208

2. Find the percent of each number.

a. 45% of 200 b. 220% of 85 c. 0.3% of 200

3. Write a percent proportion to solve each problem.

a. 95 is 95% of what number.

b. A Tiger can eat food that weighs up to 15% of its body weight. If a tiger can eat 75 pounds of food, how much does the tiger weight.

c. The Drama club held a car wash on Friday and Saturday. They washed a total of 60 cars. If they washed 40% of the cars of Friday, how many cars did they wash on Friday?

d. An Asian elephant at the Dubai Safari Park weighs about 3 tons and eats about 300 pounds of food a day. What percentage of its body weight does the elephant eat each day. (1 ton = 2000 pounds)

https://www.youtube.com/watch?v=ShyWLWCXCQI

https://www.youtube.com/watch?v=rR95Cbcjzus

https://www.youtube.com/watch?v=Aj0OvQMBNg8

End of Term 1

REVISION NOTES

Math

Elite Stream-Sector C

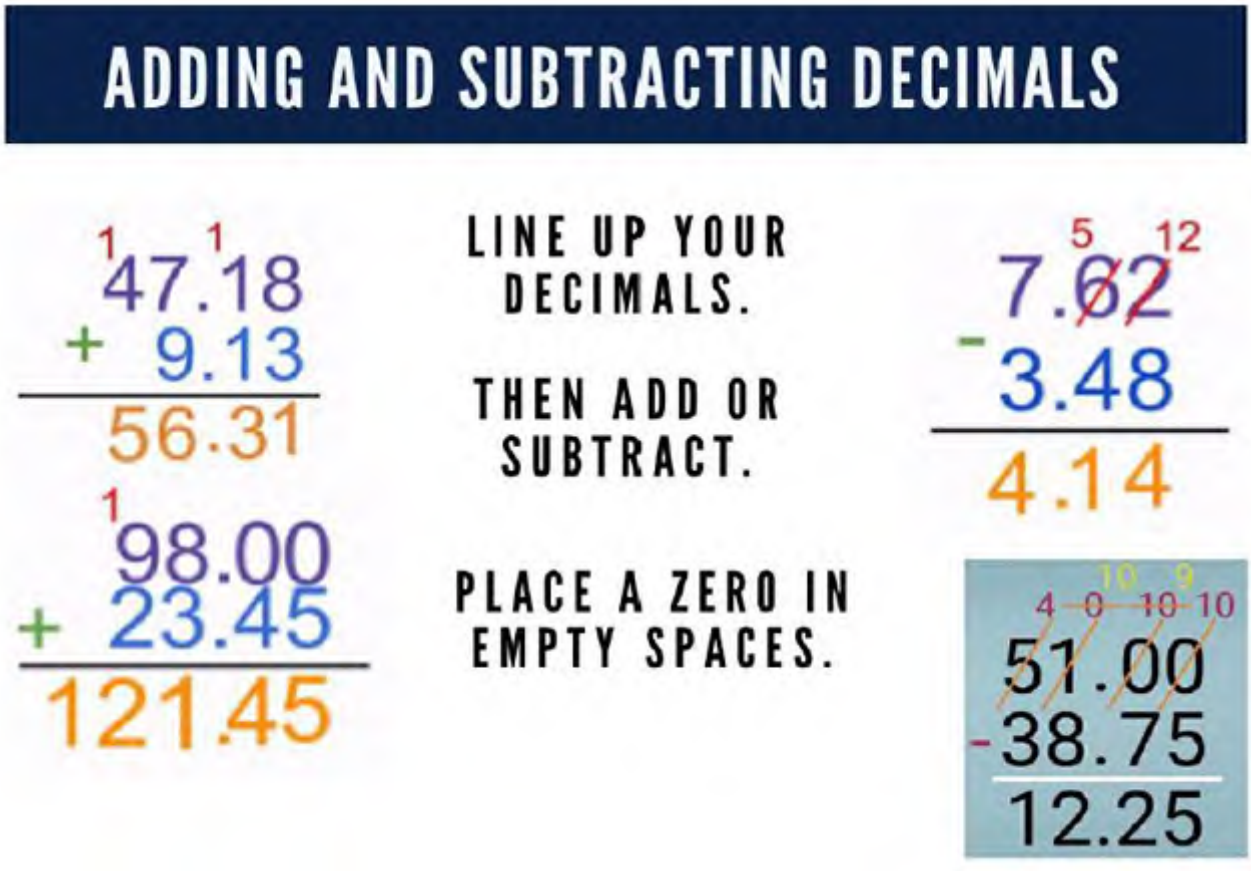
Grade 6

CHAPTER-3

Compute with Multi Digit Numbers

Lesson 3. 1- Add and Subtract Decimals		
Learning Outcomes		**Textbook Page**
1	6ASP.3.1.1 Add and subtract decimals by lining up the decimal points and annexing zeros if required.	**174, 175**
2	6ASP.3.1.2 Solve real-world problems involving adding and subtracting decimals.	**176**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems



Example: What is 0.3+0.4?

$$\begin{array}{r} 0.3 \\ +\ 0.4 \\ \hline 0.7 \end{array}$$

Solution: Study this number line.

Find the sum of 10.8 and 5.34

$$\begin{array}{r} 10.80 \\ +05.34 \\ \hline 16.14 \end{array}$$

Find the difference of 7.122 and 3.41

$$\begin{array}{r} 6 \\ 7.122 \\ -\ 3.410 \\ \hline 3.712 \end{array}$$

Roger and Bianca were running a relay race. The race was 15.59 kilometers total. If Roger ran 6.99 kilometers how far did Bianca run?

Answer: Bianca ran 8.6 km.

1) **Find the total of 19.04 and 12.9**

2) **Subtract 22.25 from 34.75**

3) Geoff's bean plants measure 245.8cm, 139.2cm and 199.7cm. He is planning on stacking them on top of each other in order to find a golden goose. How high will Geoff's plants stand?

https://www.youtube.com/watch?v=kwh4SD1ToFc

Lesson 3.2 Estimate Products

Learning Outcomes		Textbook Page
1	6ASP.3.2.1 Estimate products of decimals by rounding and using compatible numbers.	182
2	6ASP.3.2.2 Solve real-world problems involving estimating the products of decimals	183

Estimate 8.7×2.8.

Round to the nearest whole number to make it easier to compute mentally.

$$\begin{array}{rcll} 8.7 & \rightarrow & 9 & \text{Round 8.7 to 9.} \\ \times\ 2.8 & \rightarrow & \times\ 3 & \text{Round 2.8 to 3.} \\ & & 27 & \end{array}$$

The product is about 27.

Estimate: 69.7 x 19.4

Which of the following has a product that is approximately 50?

A) 24.2×2.8
B) $1.7 \times 4.9 \times 5.2$
C) 34.7×15.3
D) $4.6 \times 2.6 \times 5.9$

The average walking speed of a person is 4.8 kilometers per hour. Estimate the number of kilometers could you walk in 3 hours?

Use estimation to determine whether each answer is reasonable. If the answer is reasonable, write *yes*. If not, write *no* and provide a reasonable estimate.

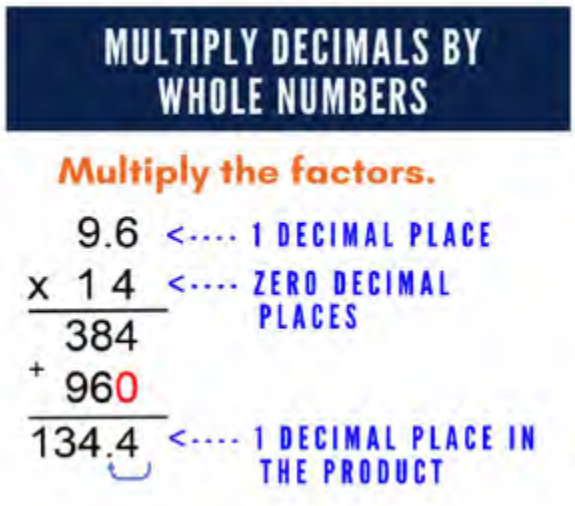
a) $2{,}103 \times 24 = 50{,}472$

b) $42.8 \times 65 = 24{,}300$

https://www.youtube.com/watch?v=IYfegzp6iB8
https://www.youtube.com/watch?v=vwkRjBes5sI

Lesson 3-3 Multiply Decimals by Whole Numbers

Learning Outcomes		Textbook Page
1	6ASP.3.3.1 Find the products of decimals and whole numbers, annexing zeros if required.	190
2	6ASP.3.3.2 Solve real-world problems involving multiplying decimals by whole numbers	191



What is the product of 0.3 and 4?

- Ignore the zero and point , 3 x 4 = 12,
- check how many numbers after the decimal point, since it is 1,
- Put point between 1 and 2 = 1.2

3 x 0.2 = 0.6, 3 x 0.02 = 0.06, 3 x 0.002 = 0.006

Find 4 x 0.3 =

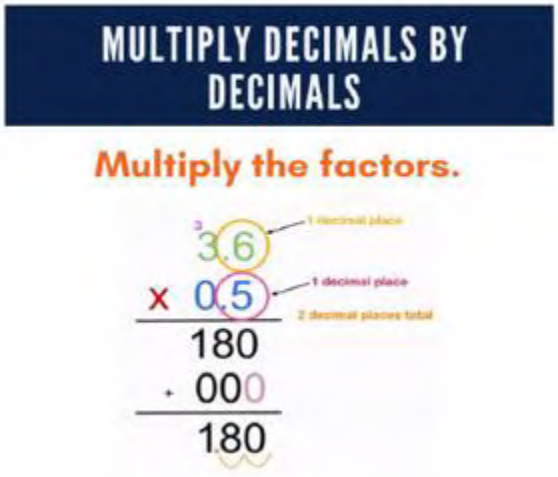
4 x 0.03 =

4 x 0.003 =

Saleh buys 12 pencils for AED 0.75 each. He pays with AED 10 bill. How much change will he receive?

Lesson 3-4 Multiply Decimals by Decimals

Learning Outcomes		Textbook Page
1	6ASP.3.4.1 Multiply decimals by decimals, annexing zeros if required.	198
2	6ASP.3.4.2 Solve real-world problems involving multiplying decimals by decimals.	200



Katelyn has a vegetable garden that measures 16.75 feet in length and 5.8 feet in width. Find the area of the garden. Justify your answer.

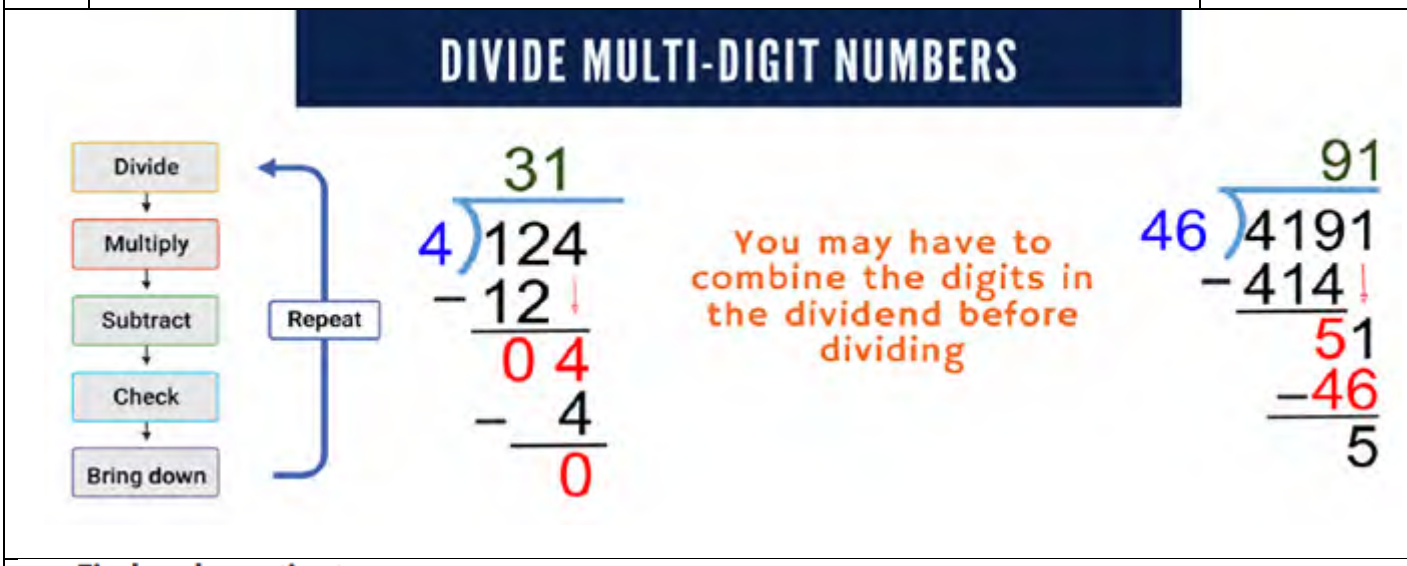
Multiply.

$3.4 \times 5.2 =$ _____

$1.2 \times 0.015 =$ _____

Lesson 3-5 Divide Multi-Digit Numbers

Learning Outcomes		Textbook Page
1	6ASP.3.5.1 Find quotients involving three- and four-digit dividends.	212
2	6ASP.3.5.2 Solve real-world problems involving quotients with multi-digit dividends.	214



Find each quotient.

20. 182 ÷ 7 = 26

Homework Help

26
7)182
− 14
42
− 42
0

21. 345 ÷ 6 = _____

22. 792 ÷ 33 = _____

23. 811 ÷ 79 = _____

The total number of seats in a college stadium is 54,912. There are 44 sections and each section has an equal number of seats. How many seats are in each section?

Divide 54,912 by 44.

$$
\begin{array}{r}
1{,}248 \\
44\overline{)54{,}912} \\
-44 \\
\hline
109 \\
-88 \\
\hline
211 \\
-176 \\
\hline
352 \\
-352 \\
\hline
0
\end{array}
$$

Divide each place-value position from left to right.

There are 1,248 seats in each section.

A city library has 9,440 nonfiction books. The librarian wants to divide the books evenly among 80 shelves. How many books will be on each shelf?

Lesson 3-6 Estimate Quotients

Learning Outcomes		Textbook Page
1	6ASP.3.6.1 Estimate quotients of decimals by rounding and using compatible numbers.	**220**
2	6ASP.3.6.2 Solve real-world problems involving estimating quotients.	**222**

The Jenkins family bought five tickets to a charity auction. The receipt shows the total cost of the tickets. Estimate the cost of each ticket. Justify your answer.

Estimate 59.6 ÷12

$5\overline{)61.25} \rightarrow 5\overline{)60}$ Round 61.25 to 60.

Each ticket costs about $12.
Since $5 \times 12 = 60$ and $60 \approx 61.25$, the answer is reasonable.

Estimate 56 ÷ 6.8.

Estimate 63 ÷ 6.7

Round the divisor, ☐, to a whole number.

The dividend is ☐.

So, round 6.8 to a whole number that is a _____ of 56.

Round 6.8 to ☐.

$6.8\overline{)56} \rightarrow$ ☐$\overline{)56}$ (☐ above)

So, 56 ÷ 6.8 is about ☐.

Check by Multiplying $6.8 \times$ ☐ = ☐

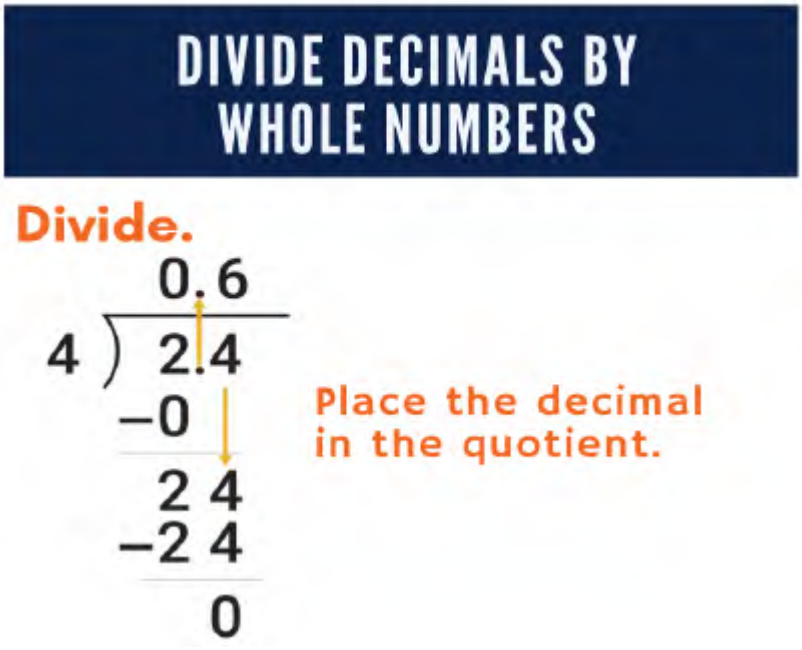
☐ ≈ 56 ✓

There are approximately 250.9 million cars in the United States. Spain has approximately 25.1 million cars. About how many times more cars does the U.S. have than Spain? Explain why your answer is reasonable.

https://www.youtube.com/watch?v=CTWuNz_tvhE

3-7 Divide Decimals by Whole Numbers

Learning Outcomes		Textbook Page
1	6ASP.3.7.1 Divide decimals by one- and two-digit whole numbers.	228
2	6ASP.3.7.2 Solve real-world problems involving dividing decimals by whole numbers.	229



Find 6.8 ÷2

$$\begin{array}{r} 3.4 \\ 2\overline{)6.8} \\ -\,6 \\ \hline 0\,8 \\ -\,8 \\ \hline 0 \end{array}$$

Find 7.7 ÷14

$$\begin{array}{r} 0.55 \\ 14\overline{)7.70} \\ -\,7\,0 \\ \hline 70 \\ -\,70 \\ \hline 0 \end{array}$$

Find 6.74 ÷3

$$\begin{array}{r} 2.246 \\ 3\overline{)6.740} \\ -\,6 \\ \hline 07 \\ -\,6 \\ \hline 14 \\ -\,12 \\ \hline 20 \\ -\,18 \\ \hline 2 \end{array}$$

Marcel Park is weeding the rectangular vegetable garden. The garden has an area of 599.5 square feet. If the garden is 22 feet wide, how long is the garden? Justify your procedure.

3-8 Divide Decimals by Decimals

Learning Outcomes		Textbook Page
1	6ASP.3.8.1 Divide decimals by decimals, annexing zeros if required.	236
2	6ASP.3.8.2 Solve real-world problems involving dividing decimals by decimals.	238

DIVIDE DECIMALS BY DECIMALS

Change the divisor to a whole number.

Multiply by 100 to change into a whole number.

$0.12 \overline{)\ 5.16}$

Multiply by the same number.

Rewrite the problem.

$12 \overline{)\ 516}$

Divide.

$$\begin{array}{r} 43 \\ 12 \overline{)\ 516} \\ -48\downarrow \\ \hline 36 \\ -36 \\ \hline 00 \end{array}$$

Find 0.009 ÷ 0.18.

$0.18 \overline{)\ 0.009}$

Multiply each by 100.

$$\begin{array}{r} 0.05 \\ 18 \overline{)\ 0.90} \\ -\ 0 \\ \hline 09 \\ -\ 00 \\ \hline 90 \\ -\ 90 \\ \hline 0 \end{array}$$

So, 0.009 ÷ 0.18 is 0.05.

2.07 ÷ 0.9 = _____

18.21 ÷ 0.9

0.242 ÷ 0.4 = _____

A rectangular conservation park has an area of 25.2 square miles and a length of 5.25 miles.

(a) Estimate the width of the park. Show your work using $A = lw$.

(b) Find the exact width of the park.

Using your answer above, explain why your answer in part (a) is reasonable.

A submarine sandwich 1.5 feet long is cut into 0.25 -foot pieces. How many pieces will there be?

About 24.8 million people live in Texas. About 0.6 million people live in Vermount. How many times as many people live in Texas than in Vermount? Round to the nearest tenth, if necessary.

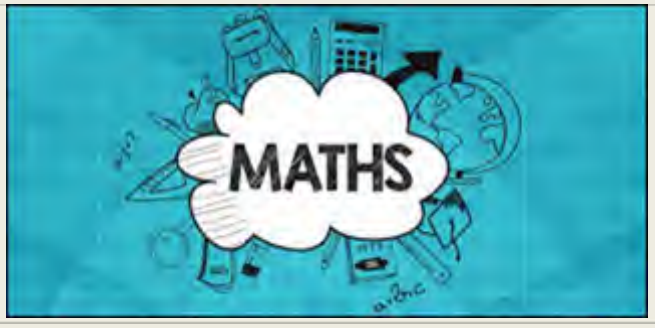
Extra videos if needed

https://www.youtube.com/watch?v=FQwHKQoR7Ec

https://www.youtube.com/watch?v=bHkI3hGQhZI

End of Term 1

REVISION NOTES



Math

Elite Stream-Sector C

Grade 6

CHAPTER - 4

Multiply and Divide Fractions

Lesson 4-1 Estimate Products of Fractions		
Learning Outcomes		**Textbook Page**
1	**6ASP.4.1.1 Estimate products of fractions by rounding and using compatible numbers.**	**254**
2	**6ASP.4.1.2 Solve real-world problems involving estimating products of fractions.**	**256**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

To estimate:

- **Use compatible numbers**
- **Round to the nearest whole number to make compatible number**

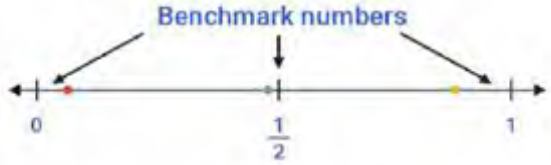
$19 \times \frac{3}{4}$ — Change 19 to a close multiple of 4

$\approx \frac{5}{\cancel{20}} \times \frac{3}{\cancel{4}_{1}}$ — Simplify. Divide 20 and 4 by 4

$= 5 \times 3$ — Multiply.

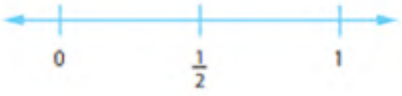
$= 15$

Benchmark Number is a number that can be used to help make estimates.



When estimating with fractions, we can **round** each fraction to a benchmark number of 0, $\frac{1}{2}$, or 1

Estimate each product:

$\frac{1}{3}$ of 41 $\approx$ 14 $41 \approx 42; \frac{1}{3} \times \frac{14}{42} = \frac{14}{1}$ or 14	$\frac{2}{9}$ of 88 $\approx$ _____	$\frac{2}{3} \times 10 \approx$ _____
Estimate $\frac{1}{9} \times \frac{4}{5}$. Place dots on the number line at $\frac{1}{9}$ and $\frac{4}{5}$. Round to 0, $\frac{1}{2}$, or 1. $\frac{1}{9}$ is about 0 and $\frac{4}{5}$ is about 1. $\frac{1}{9} \times \frac{4}{5} \rightarrow 0 \times 1 =$ ☐ So, $\frac{1}{9} \times \frac{4}{5}$ *is about* ☐. 	Estimate: $\frac{5}{7} \times \frac{1}{9} \approx$ _____	Estimate: $4\frac{1}{3} \times 2\frac{3}{4} \approx$ _____

A kitchen measures $24\frac{1}{6}$ ft by $9\frac{2}{3}$ ft. Estimate the area of the kitchen?

https://www.youtube.com/watch?v=6LrYP6cl1Co

Lesson 4-2 Multiply Fractions and Whole Numbers

Learning Outcomes	Textbook Page
6ASP.4.2.1 Find products of fractions and whole numbers.	**262**
6ASP.4.2.2 Solve real-world problems involving products of fractions and whole numbers	**264**

Sample Notes/Questions (previous exam sample/end of chapter) *focus on word problems

$$3 \times \frac{1}{6} =$$ Change the whole number to a fraction and then multiply

$$\frac{3}{1} \times \frac{1}{6} =$$ Multiply the numerators and then the denominators.

$$\frac{3 \div 3}{6 \div 3} =$$ Simply using the GCF.

$$\frac{1}{2}$$

Find the product:

$2 \times \frac{2}{5}$

$2 \times \frac{2}{5} = \frac{2}{1} \times \frac{2}{5}$

$= \frac{2 \times 2}{1 \times 5}$

$= \frac{4}{5}$

Hayley's guitar lesson lasts $\frac{3}{4}$ hour. How many minutes does Hayley spend at her guitar lesson? Use the clock to help you find your answer.

Multiply:

$\frac{5}{6} \times 15 =$ _____

A tire cap costs AED 150. This week's discount on caps is 2/3. What will be the cost of a tire cap after the discount?

At a school, there are 864 students and 80 staff members. $\frac{5}{8}$ of the students are boys.

1. How many girls are there in the school?

2. $\frac{1}{6}$ of the boys joined the basketball team and $\frac{2}{9}$ of the boys joined the soccer team. How many boys are there in the soccer team?

Lesson 4-3 Multiply Fractions

Learning Outcomes	Textbook Page
6ASP.4.3.1 Find products of two or more fractions.	**262**
6ASP.4.3.2 Solve real-world problems involving products of two or more fractions.	**264**

Simply using the GCF, if possible.

Multiply the numerators and then the denominators.

Multiply:

$\frac{1}{5} \times \frac{3}{10} =$

$\frac{1}{10} \times \frac{2}{4} =$

$\frac{1}{9} \times \frac{2}{3} =$

Lamis spent $\frac{3}{4}$ of her allowance at the mall. Of the money spent at the mall, $\frac{1}{2}$ was spent on earphones. What part of her allowance did Lamis spend on earphones? [

Musa has a garden at the front of his house.

$6\frac{1}{8}$ ft

$14\frac{7}{8}$ ft

What is the area of the garden?

https://www.youtube.com/watch?v=T3D9z6lUldM

https://www.youtube.com/watch?v=56aYsGpwQvQ&spfreload=10

Lesson 4-4 Multiply Mixed Numbers

Learning Outcomes	Textbook Page
6ASP.4.4.1 Find products involving mixed numbers.	278
6ASP.4.4.2 Solve real-world problems involving products of mixed numbers	279

To multiply Mixed Fractions:

- convert to Improper Fractions
- Multiply the Fractions
- convert the result back to Mixed Fractions

$$4\frac{1}{2} \times 2\frac{2}{3} = \frac{9}{2} \times \frac{8}{3}$$

$$= \frac{\overset{3}{\cancel{9}}}{\underset{1}{\cancel{2}}} \times \frac{\overset{4}{\cancel{8}}}{\underset{1}{\cancel{3}}}$$

$$= \frac{3}{1} \times \frac{4}{1}$$

$$= \frac{12}{1} \text{ or } 12$$

Multiply. Write in simplest form:

$2\frac{1}{2} \times 3\frac{1}{4} =$

$3\frac{1}{5} \times 3\frac{2}{3} =$

$\frac{1}{7} \times 5\frac{5}{6} \times 1\frac{1}{4}$

Model with Mathematics Use the formula $d = rt$ to find the distance d a long-distance runner can run at a rate r of $9\frac{1}{2}$ miles per hour for time t of $1\frac{3}{4}$ hours.

A restaurant use 2¾ gallons of barbecue sauce a day to make their barbecue chicken wings. They use 1½ times as much hot sauce making their hot wings. How many gallons of hot sauce do they use in a day?

Lesson 4-5 Convert Measurement Units

Learning Outcomes	Textbook Page
6ASP.4.5.1 Convert units of measure using unit ratios and dimensional analysis.	278
6ASP.4.5.2 Solve real-world problems involving conversion of units.	279

Customary Conversions			
Type of Measure	**Larger Unit**	**⟶**	**Smaller Unit**
Length	1 foot (ft)	=	12 inches (in.)
	1 yard (yd)	=	3 feet
	1 mile (mi)	=	5,280 feet
Weight	1 pound (lb)	=	16 ounces (oz)
	1 ton (T)	=	2,000 pounds
Capacity	1 cup (c)	=	8 fluid ounces (fl oz)
	1 pint (pt)	=	2 cups
	1 quart (qt)	=	2 pints
	1 gallon (gal)	=	4 quarts

10 cm = ___?___ inches

Choose conversion factor:

$\frac{2.54\text{ cm}}{1\text{ inch}}$ or $\frac{1\text{ inch}}{2.54\text{ cm}}$

Although these are both equivalent, choose the one with the desired unit in the numerator (top)

OR

Choose the ratio that allows you to divide out the common units.

$10\text{ cm} \times \frac{1\text{ inch}}{2.54\text{ cm}} = \frac{10 \times 1\text{ inch}}{2.54} = 3.93\text{ in}$

Convert 8 yards to feet.

Choose conversion factor.

$\frac{3\text{ ft}}{1\text{ yd}}$ or $\frac{1\text{ yd}}{3\text{ ft}}$

$8\text{ yd} =$

$8\text{ yd} \times \frac{3\text{ ft}}{1\text{ yd}} = \frac{8\text{ yd}}{1} \times \frac{3\text{ ft}}{1\text{ yd}} = \frac{24\text{ ft}}{1} = 2$

Practice: Choose the appropriate conversion factor.

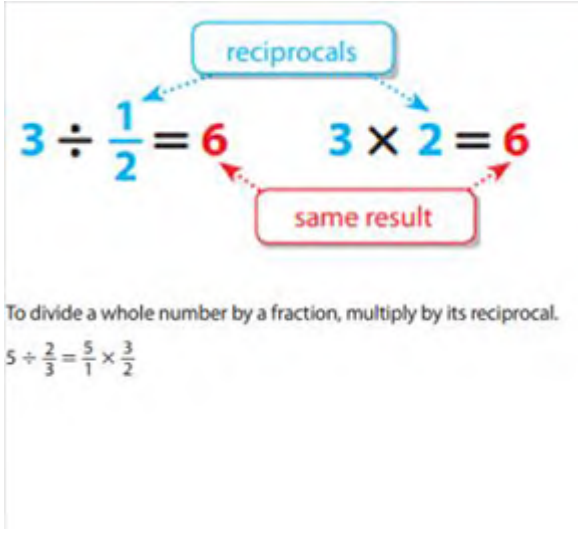
Inches to feet	$\frac{1\text{ ft}}{12\text{ in.}}$	$\frac{12\text{ in.}}{1\text{ ft}}$
Minutes to hours	$\frac{60\text{ min}}{1\text{ hr}}$	$\frac{1\text{ hr}}{60\text{ min}}$
Meters to centimeters	$\frac{1\text{ m}}{100\text{ cm}}$	$\frac{100\text{ cm}}{1\text{ m}}$

4 gal = 16 qt 4 gal = 4 gal × 4 qt / 1 gal = 4/1 × 4/1 qt = 16/1 or 16 qt	$3\frac{3}{8}$ T = _____ lb	13 c = _____ pt

https://www.youtube.com/watch?v=8qliD2ziTqU

Lesson 4-6 Divide Whole Numbers by Fractions

Learning Outcomes	Textbook Page
6ASP.4.6.1 Divide whole numbers by fractions.	314
6ASP.4.6.2 Solve real-world problems involving division of whole numbers by fractions.	315



Find the reciprocal

1/10 10

1/10 × 10/1 = 1

The reciprocal is 10/1 or 10.

7/9 _____ 8 _____

$$5 \div \frac{4}{9} = \frac{5}{1} \div \frac{4}{9} = \frac{5}{1} \times \frac{9}{4} = \frac{45}{4} = 11\frac{1}{4}$$

Divide. Write in simplest form.

$3 \div \frac{5}{6} =$ _____

$2 \div \frac{3}{5} =$ $3\frac{1}{3}$

$2 \div \frac{3}{5} = \frac{2}{1} \times \frac{5}{3}$

$= \frac{10}{3}$ or $3\frac{1}{3}$

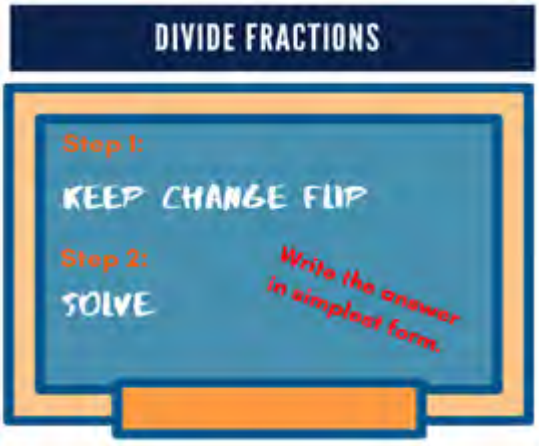
$4 \div \frac{5}{9} =$ _____

Turner has 6 pounds of pasta. Each time he makes dinner he uses $\frac{3}{4}$ pound of pasta. How many dinners can he make?

One teacher wants to give each student $\frac{4}{5}$ of a slice of pizza. If the teacher has 4 slices of pizza, then how many students will she be able to hand out pizza to?

Lesson 4-7 Divide Fractions

Learning Outcomes	Textbook Page
6ASP.4.7.1 Divide fractions by fractions or by whole numbers.	314
6ASP.4.7.2 Solve real-world problems involving division of fractions by fractions or by whole numbers.	316



To divide by a fraction, multiply by its reciprocal.

Numbers

$$\frac{5}{6} \div \frac{2}{3} = \frac{5}{6} \times \frac{3}{2}$$

Algebra

$$\frac{a}{b} \div \frac{c}{d} = \frac{a}{b} \times \frac{d}{c}, \text{ where } b, c, \text{ and } d \neq 0$$

$$\frac{5}{9} \div \frac{1}{10} = \frac{5}{9} \times \frac{10}{1} = \frac{50}{9} = 5\frac{5}{9}$$

Divide. Write in simplest form. Check by multiplying.

$\frac{1}{2} \div \frac{2}{3} = \frac{3}{4}$

$\frac{1}{2} \div \frac{2}{3} = \frac{1}{2} \times \frac{3}{2}$

$= \frac{3}{4}$

$\frac{3}{4} \times \frac{2}{3} = \frac{6}{12}$ or $\frac{1}{2}$ ✓

$\frac{3}{4} \div \frac{3}{8}$

$\frac{7}{8} \div \frac{5}{4}$

A recipe calls for quarter of a cup of sugar to make a chocolate mug brownie. How many mugs of brownies can be made with $1\frac{3}{4}$ cups of sugar?

_____

A candy bar is 3/4 of an inch long. If it is divided into pieces that are 1/8 of an inch long, then how many pieces is that?

_____

Lesson 4-8 Divide Mixed Numbers

Learning Outcomes	**Textbook Page**
6ASP.4.8.1 Find quotients involving mixed numbers.	322
6ASP.4.8.2 Solve real-world problems involving quotients of mixed numbers.	324

$5\frac{1}{2} \div 2 = 2\frac{3}{4}$

$5\frac{1}{2} \div 2 = \frac{11}{2} \div \frac{2}{1}$

$= \frac{11}{2} \times \frac{1}{2}$

$= \frac{11}{4}$ or $2\frac{3}{4}$

$\frac{11}{\cancel{4}_{2}} \times \frac{\cancel{2}^{1}}{1} = \frac{11}{2}$ or $5\frac{1}{2}$ ✓

Find the quotient.

1. $1\frac{2}{3} \div 5\frac{1}{9} =$

2. $2\frac{3}{5} \div 4\frac{4}{9} =$

3. $3\frac{1}{3} \div 1\frac{1}{9} =$

4. $6\frac{1}{6} \div 4\frac{3}{4} =$

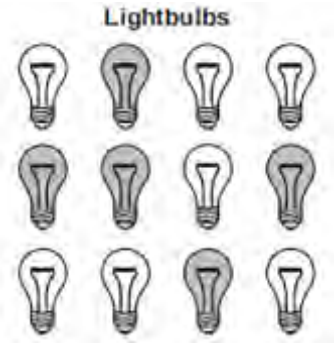
How many $\frac{3}{4}$ ft of pipe can be cut from a $6\frac{1}{3}$ ft pipe?

Sheila is baking a few cakes for the bake sale for her school. Each cake requires $2\frac{1}{2}$ cups of sugar. How many cakes can she bake if she has $7\frac{1}{3}$ cups of sugar?

Mathematics POP QUIZ - Grade 6

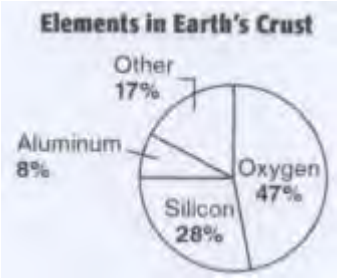
Student Name		Date	

Please read each question carefully and choose the best answer.

1	The model below represents the number of lightbulbs in Katie's home.  The shaded lightbulbs represent the number of lightbulbs that are burnt out. Which **ratio** is **equivalent** to the ratio of **burnt-out lightbulbs to the total number of bulbs?**	
	A	5:12
	B	7:12
	C	5:7
	D	7:5

2	In a survey, **9** out of **15** students named math as their favourite subject. Express this rate as a **decimal**.	
	A	0.06
	B	0.6
	C	60
	D	600

3 The graph shows the elements found in the earth's crust. What **fraction** of earth's crust is **silicon?**



A	$\frac{1}{28}$
B	$\frac{7}{25}$
C	$\frac{2}{5}$
D	$\frac{1}{2}$

4 **Abdul read $\frac{5}{7}$** of the pages in his book. He has **28** pages left to read. How many pages did he read already?

A	70
B	98
C	140
D	196

5 The school science lab has **3 fish tanks**. Each tank holds a different volume of water and a different number of fishes.

TANK	FISH	VOLUME (in litres)
A	5	40
B	12	100
C	23	180

Order the tanks by volume per fish from **least to greatest.**

A	ABC
B	CBA
C	CAB
D	BCA

Mathematics Performance Task - Grade 6

Student Name		Class		Date	

Section II – Performance Task: Answer all the questions below.

6	Noora got 86% on her science test, $\frac{47}{50}$ on her Math test, and 0.89 on her English test. a) Order her scores from **least** to **greatest**. Show your work. b) Write 86% as a fraction in its simplest form. c) Write another fraction equivalent to your answer in ***part b*** above.	**5 marks**

7

The table shows the average monthly rainfall in winter, in Dubai and Ras Al Khaimah.

Portion of Rainfall per month		
MONTH	DUBAI	RAS AL KHAIMAH
November	$\frac{3}{8}$	40%
December	$\frac{1}{8}$	32%
January	$\frac{1}{2}$	38%

a) Write Dubai's rainfall as a percent for November and December. Show your work.

b) Write Ras Al Khaimah's rainfall for December and January as decimals.

c) Compare the rainfall in Dubai and Ras Al Khaimah for the months of November and December.

5 marks

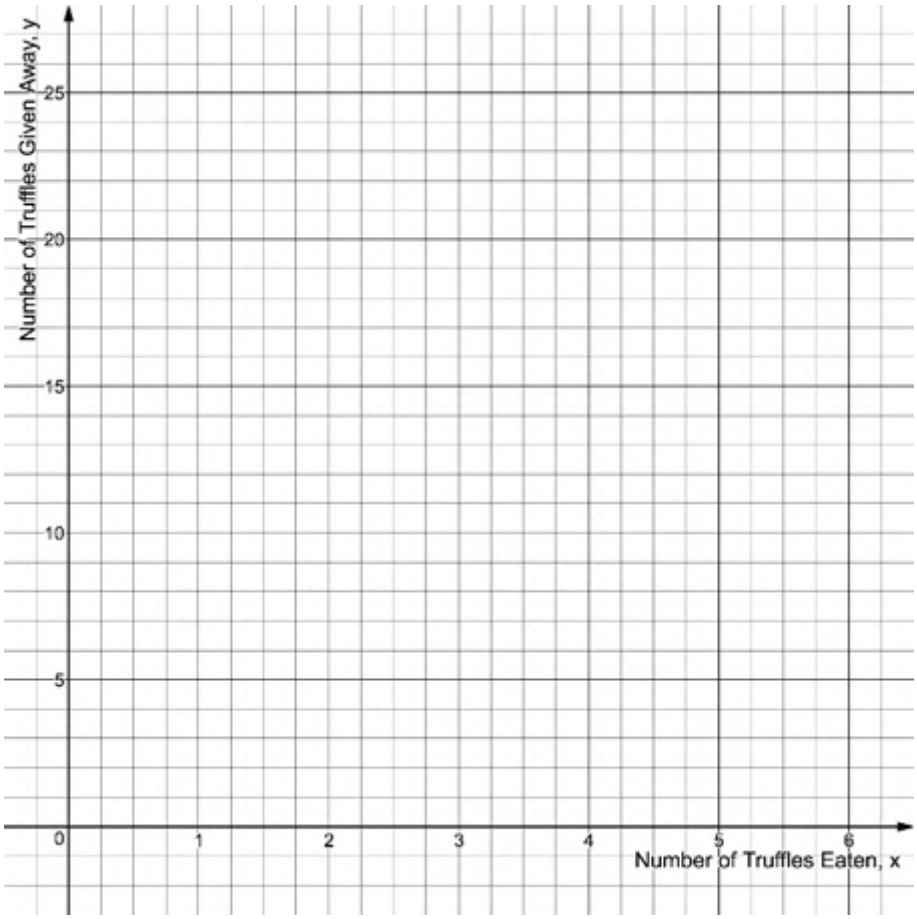
8

Aisha took chocolate truffles to school to share with her friends. For every **16 truffles** she gave away, Aisha ate **four**.

a) Fill in the **ratio** table below to show how many truffles Aisha gave away if she ate **up to six**.

Gave Away		8		16		
Ate			3	4		

b) Use the coordinate plane below to graph the information in the table.



5 marks

c) Describe the pattern on the graph.

Multiple Choice	/5
Performance Task	/15
Total Score	/20
Percentage	/100

Feedback

Tested Learning outcomes	Question	√	X	Action (extra practice question)
Use ratios to compare categorical data in real-world situations.	1			
Convert decimals to fractions and vice versa	2			
Convert percents to fractions and vice versa	3			
Solve ratio problems using bar diagrams or equations with equivalent ratios	4			
Compare ratios or rates using unit rates.	5			
Solve real-world problems involving converting percents to fractions or Solve real-world problems involving converting percents to decimals or vice versa.	6.a)			

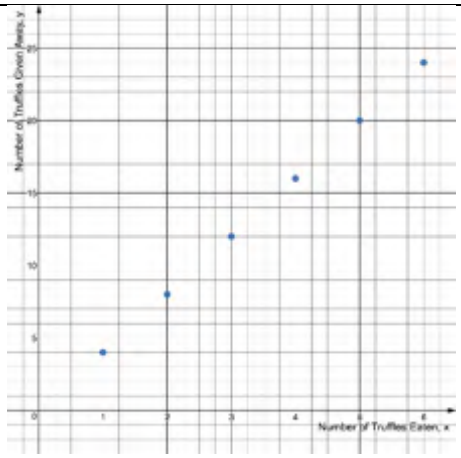
Write a ratio in simplest form.	b)			
Write equivalent ratios using scaling.	c)			
Convert percents to fractions and vice versa.	7.a)			
Solve real-world problems involving converting percents to decimals or vice versa.	b) and c)			
Write equivalent ratios using a ratio table	8. a)			
Graph ordered pairs on the coordinate plane.	b)			
Compare ratios using tables and graphs	c)			
Student Comments				
Parent Signature				

Answer Key

Multiple Choice	
Q1	A
Q2	B
Q3	B
Q4	A
Q5	C

Structured Response Answer Key

Question	Correct Answer	Allocation of Marks
Q6	a) Fraction to percent = 94% Decimal to percent=89% Order least to greatest: science; 86%, English; 89%, math 94%	1 mark 1 mark 1 mark
	b) $\frac{86}{100}$ in its simplest form $\frac{43}{50}$	1 mark
	c) Any other equivalent fraction	1 mark
Q7	a) November = 37.5 % December = 12.5% b) December= 0.32 January = 0.38 c) Nov = 0.4 Dec =0.32 Ras Al Khaimah > Dubai for both months	1 mark 1 mark 1 mark 1 mark 1 mark Award the marks for any other correct comparison
Q8	a) *Gave Away*: **4** 8 12 16 **20** **24** *Ate*: **1** 2 3 4 **5** **6**	Unit rate = 1 mark Equivalent ratios = I mark
	b)	Correct plots for all ordered pairs (x,y) = (2 marks)

		
	c) Points appear in a straight line	(1 mark)

Mathematics POP QUIZ - Grade 6

Student Name		Date	

Please read each question carefully and choose the best answer.

1	A school bag costs **AED 201.60.** A pencil case costs **AED 14.72**. What is the difference between the cost of the school bag and the pencil case?	
	A	AED 0.544
	B	AED 186.88
	C	AED 216.32
	D	AED 348.80

2	80 is 25% of what number?	
	A	20
	B	55
	C	105
	D	320

3	The **original price** of a pair of shoes is **AED 42**. The sale price is **20% off** the original price. What is the **amount off** the original price?	
	A	8.4
	B	20
	C	22
	D	62

4	A year on Saturn is equal to 29.4 years on Earth. **About** how many Earth-years are equal to 3.2 years on Saturn?	
	A	26.2
	B	32.5
	C	90
	D	94.08

5	Mona buys **14** folders for 0.5 AED **each**. How much **change** will she receive if she pays with 15 AED?	
	A	AED 0.5
	B	AED 1
	C	AED 7.5
	D	AED 8

Mathematics Performance Task - Grade 6

Student Name		Class		Date	

Section II – Performance Task: Answer all the questions below.

6	Mohammed and his mother are **estimating** how much money they will have if they put AED 143.70 in their bank each week for 20 weeks. Mohammed said they would have **about** AED 3,000. a. What numbers did Mohammed use in his **estimation**? Show your work to verify your answer. (1 mark) b. Mohammed and his mother want to buy a new phone that will cost AED 3,000.25; will they have enough money? **Explain** your reasoning. (2 marks) c. **If they can** buy it, how much extra money will they have after buying the phone? or **If they CANNOT** buy it, how much more money will they need? (2 marks)	**5 marks**

7

Azza is taking her family out for drinks. Her father orders an Americano, her mother orders Turkish coffee. Azza and her **2** sisters each order Karak tea.

Menu Item	Cost (VAT Included)
Cappuccino	35.75 AED
Turkish Coffee	24.25 AED
Espresso	22.10 AED
Karak Tea	12.20 AED
Americano	15 AED

a) How much will Azza spend on Karak Tea for her 2 sisters **and** herself? (1 mark)

b) How much will she have to pay **in total**? (1 mark)

c) Azza has a 200 AED bill, how much will the server give her back as change? (1 mark)

d) The drinks were very good and Azza wants to give **10%** of the **total cost** as a tip to the server. How much should she give? **Explain** your reasoning**.** (2 marks)

5 marks

8

There are **450** vehicles in a car park.

Type of Vehicle	Percent of All Cars	Number of Cars
Hybrid	28	
Sport utility	20	
sedan	38	171

a) What **expression** can be used to find the **number of cars** for **sedan** type vehicles? Select all that apply.

$a)\ 0.38 \times 450$ b) $\frac{19}{50} \times 450$ $c)\ 0.038 \times 450$ $d)\ 380 \times 4.5$

(2 marks)

b) Find the **number of cars** for each of these types of vehicles; the **hybrid** and the **sport utility.** (2 marks)

c) In a different car park, there were 75 sedan cars. 75 is 15% of what number? (1 mark)

5 marks

Multiple Choice	/5
Performance Task	/15
Total Score	/20
Percentage	/100

Feedback

Tested Learning outcomes	Question	√	X	Action (extra practice question)	Cognitive Level
Subtracting decimals by lining up the decimal point	1				
Use number line to find the whole	2				
Find percent of a number	3				
Estimate products using Rounding	4				
Multiply decimals	5				
Estimate products of decimals by rounding	6a				
Solve real world problems involving estimating the products of decimals	6b				
Add and subtract decimals	6c				
Finding products of decimals and whole numbers	7a				
Add decimals by lining up decimal points	7b				
Solve real-world problems involving adding and subtracting decimals	7c				
Solve real world problems involving percent proportion and estimating	7d				
Find the percent of a number	8a				
Find the percent of a number	8b				
Use the percent proportion to find the whole, given a part and the percent	8c				
Student Comments					
Parent Signature					

Answer Key

Multiple Choice	
Q1	B
Q2	D
Q3	A
Q4	C
Q5	D

Structured Response Answer Key

Question	Correct Answer	Allocation of Marks
Q6	a) 150x20 = 3000 AED	1 mark for 150 and 20 With shown multiplication
	b) No, Mohammed rounded up so they will have less money than the estimate not more.	1 mark for "no" 1 mark for explanation (If they said yes but gave a clear explanation that makes sense give 1 mark.)
	c) 143.70x20 = 2,874AED 3000.25 -2874 =126.25 AED	1 mark for finding the exact AED Saved 1 mark for correct subtraction
Q7	a) 36.60 AED $AED\ 12.20\ \times\ 3\ =AED\ 36.60$	1 mark for final answer
	b) 75.85 AED $(15\ +24.25\ +36.60)\ \ =AED\ 75.85$	1 mark for correct answer (don't double penalize for part a)
	c) 124.15 AED $AED\ 200-AED75.85=AED\ 124.15$	1 mark for final answer (don't double penalize for part b)
	d) Ex.≈ $7.59\ AED\ rounded\ to\ nearest\ fill$ $\approx 7.60\ AED\ they\ don't\ make\ 1\ fill\ coins$ $\approx 8\ AED\ rounded\ to\ nearest\ dirham$	1 mark for final answer 1 mark for reasonable explanation (don't double penalize for part b)
Q8	a) $0.38\ \times 450$ and $\frac{19}{50}\times 450$	1 mark for option a) 1 mark for option b)

<table>
<tr>
<td></td>
<td>b)
<table>
<tr><th>Type of Vehicle</th><th>Percent of All Cars</th><th>Number of Cars</th></tr>
<tr><td>hybrid</td><td>28</td><td>126</td></tr>
<tr><td>Sport utility</td><td>20</td><td>90</td></tr>
<tr><td>sedan</td><td>38</td><td>171</td></tr>
</table>
$$\frac{28}{100} \times 450 = 126$$
$$\frac{20}{100} \times 450 = 90$$</td>
<td>1 mark for 126
1 mark for 90

(Work should be shown for the mark to be awarded)</td>
</tr>
<tr>
<td></td>
<td>c) $\frac{75}{x} = \frac{15}{100} = 500$</td>
<td>1 mark for 500

(Work should be shown for the mark to be awarded)</td>
</tr>
</table>

Mathematics POP QUIZ - Grade 6

Student Name		Date	

Please read each question carefully and choose the best answer.
CALCULATORS ARE NOT ALLOWED.

1	What is the best estimate for $\frac{3}{5} \times \frac{5}{6}$?	
	A	0
	B	$\frac{1}{2}$
	C	1
	D	2

2	Calculate $\frac{2}{5} \times \frac{5}{9}$, and write your answer in the simplest form.	
	A	$\frac{2}{9}$
	B	$\frac{2}{5}$
	C	$\frac{25}{59}$
	D	1

3 Here is an advertisement showing the cost of different bikes from Bike Country.

Bike Country	
26” Bike	AED 135.99
Folding Bike Rack	AED 43.95
Seat Covers	AED 6.59
Bike Lock	AED 12.89
Helmet	AED 29.49

The cost of a 26” bike is equal to about how many bike locks?

A	About 7 locks
B	About 8 locks
C	About 9 locks
D	About 10 locks

4	Lina bought 5.7 kilograms of cashews for AED 128.25. How much did she pay for each kilogram of cashews?	
	A	2.25
	B	22.50
	C	122.55
	D	225

5	Musa has a garden at the front of his house.  What is the best estimate for the area of his garden?	
	A	84 square feet
	B	85 square feet
	C	90 square feet
	D	105 square feet

TOTAL MARKS	/5
PERCENT	%

Feedback

Tested Learning outcomes	Question	√	X	Action (extra practice question)	Cognitive Level
Estimate products of fractions by rounding and using compatible numbers.	1				
Find products of fractions and whole numbers.	2				
Solve real-world problems involving estimating quotients	3				
Divide decimals by decimals, annexing zeros if required.	4				
Solve real-world problems involving estimating products of fractions.	5				
Student Comments					
Parent Signature					

Answer Key

Multiple Choice	
Q1	B
Q2	A
Q3	D
Q4	B
Q5	C

Elite Stream-Term 1

Name		**Teacher**	
Grade	**6**	**Subject**	**Mathematics**
Section		**Date**	
Assignment	**Homework 2**		
SLO Covered	**1.1 – 3.8**	**Pages**	**7- 248**

Assignment Completeness /25%	**Deadline /25%**	**Demonstrated Knowledge /50%**
Total Grade /100%		

Section I-Multiple Choice Questions

I. Choose the best answer. **[8 marks, 1 each]**

1. Which of the following can be represented by the ratio $\frac{2}{5}$?

A. 1 teacher: 10 students

B. 5 pencils cost AED 15

C. 4 spoons of sugar to 7 cups of flour

D. Issa rode 16 kilometers in 40minutes

2. What is the sum of 8.64 + 7.098 + 10.9901?

A. 15.5281

B. 16.84701

C. 26.7281

D. 27.611

3. What is the product of 6.23 and 9.3?

A. 57.939

B. 74.76

C. 579.39

D. 747.6

4. Ms. Fatema teaches 65 grade 6 physical education students. Sixty percent of them will compete in the school competition. How many students is this?

A. 24

B. 26

C. 39

D. 60

5. Saeed makes a large rectangular painting for his mom. The area of the painting is 128.52 square meters. The painting is 12.6 meters wide. What is the height of the painting?

A. 8.6 m

B. 10.2 m

C. 105.2 m

D. 115.92 m

6. Rawda studies math every 6 days. She also studies science every 9 days. She just studied both math and science today. After how many days will she study both math and science again?

A. 12 days

B. 18 days

C. 32 days

D. 48 days

7. About how far can a subway car travel in 1 hour if its average speed is 0.96 mile per minute??

A. 0.576 miles

B. 5.76 miles

C. 57.6 miles

D. 576 miles

8. Musa paid AED 28.14 for 6 gallons of milk. What was the price per gallon of milk?

A. AED 4.69

B. AED 6.02

C. AED 22.14

D. AED 168.84

Answer the following questions. **[12 marks]**

9. Shahad is planning to buy the school supplies shown in the table. [5 marks]

School Supply	Cost
Notebook	35.75
Board Markers	14.49
Pack of Pencils	3.20

a) How much will all the school supplies cost?

b) If Shahad has AED 50.00, will she have enough money to purchase all the school supplies? Explain your reasoning.

c) How much would 7 notebooks cost?

d) Estimate the cost of 5 packs of pencils.

10. Fahad researches how many calories a person should consume per day. He finds out that a person his age should consume 68,820 calories per month. [7marks]

a) Based on a 31-day month, how many calories should Fahad consume in a day?

Fahad wants to consume less than 800 calories at lunch. The table shows the menu at his school cafeteria.

Food Item	**Calories**	**Cost (AED)**
Mushy peas	39	0.80
French fries	103	1.10
Cookie	253	1.45
Cucumber	41	0.80
Steak	342	2.30
Chicken Alfredo pizza	334	1.75
Burger	449	2.50
Ice-cream	513	2.10

b) Find two different meal options for Fahad to choose for lunch, then find the cost for each meal.

Fahad receives AED 22.00 for lunch each week. Choose one of the meals from your answer in '**part b'** for Fahad's lunch on Monday.

c) How much does he have left over for the rest of the week?

d) If he spends the same amount each day, how much could he spend each remaining day?

Homework Answer Key

Multiple Choice	
Q1	D
Q2	C
Q3	A
Q4	C
Q5	B
Q6	B
Q7	C
Q8	A

Structured Response Answer Key

Question	Correct Answer	Allocation of Marks
Q9	a) 35.75 + 14.49 + 3.20 = 53.44	1 mark for final answer
	b) Shahad will not have enough money to purchase all the school supplies. She will need AED 3.44 more	1 mark for correct answer 1 mark for logical explanation
	c) 35.75 x 7 = 250.25 AED	1 mark for final answer
	d) 3 x 5 = 15	1 mark for final answer
Q10	a) $68820 \div 31 = 2220$	1 mark for final answer
	b) Any two different meal combinations with calories totalling less than 800 Correct totalling of the cost for each meal option	1 mark for each option (2 marks). 1 mark for each correct sum (2 marks)
	c) Correct difference found of AED 22 and either one of his cost from '**part b'**	1 mark for correct subtraction
	d) Dividing his answer from **part c** by 4	1 mark for correct division