CARLINGFORD HIGH SCHOOL

DEPARTMENT OF MATHEMATICS

Year 7
Mathematics Exam

Term 2 Week 5A 2018

Name : _____

Circle your Class : 7C 7A 7R 7L 7I 7N 7G

Time allowed : ***50 Minutes***

Instructions

- No calculators allowed.
- Show all necessary working by using blue/ black pen. Pencil may be used for graphs / diagrams.
- Marks may be deducted for untidy setting out.
- Questions marked with an asterisk (*) are extension level.

Topic	Fractions	Time	Total
Standard	/36	/ 30	**/ 66**
Extension*	/6	/ 4	**/ 10**
Total	**/ 42**	**/ 34**	**/ 76**

FRACTIONS (42 marks) Show all necessary working

1. Simone says that $\frac{1}{3}$ of this diagram has been shaded. Explain why this is not correct. **[1]**

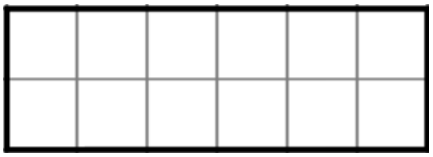
_____

_____

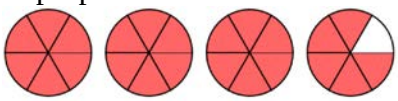
_____

2. What fraction of this shape is shaded? **[1]**

3. Shade in $\frac{1}{6}$ of this diagram. **[1]**



4. Write the following fraction as an improper fraction and a mixed numeral: **[2]**



Improper fraction: _____

Mixed numeral: _____

5. Fully simplify this fraction: **[2]**

$$\frac{24}{56}$$

6. Write $\frac{625}{100}$ as a simplest mixed numeral. **[2]**

7. What fraction is 50m of 450m? (Write answer in simplest form) **[2]**

8. How many thirds in 7 wholes? **[1]**

9. Complete the equivalent fractions. **[1]**

$$\frac{3}{8} = \frac{\square}{24}$$

10. With an arrow, show on the number line approximately where the fraction $\frac{3}{7}$ is: **[1]**

11. Circle the largest fraction. **[1]**

$$\frac{3}{5} \quad \text{or} \quad \frac{7}{10} \quad \text{or} \quad \frac{11}{15}$$

12. Write down the reciprocal of $\frac{7}{9}$ **[1]**

13. What is $\frac{2}{7}$ of 14km? **[1]**

14. Evaluate the following, writing your answers as simply as possible:

a $\frac{1}{9} + \frac{4}{9} =$ **[1]**

b $\frac{2}{5} - \frac{1}{10} =$ **[2]**

c $\frac{2}{3} + \frac{3}{4} =$ **[2]**

e $\frac{6}{7} - \frac{1}{3} =$ **[2]**

15. Evaluate the following, writing answers in simplest form:

a $\frac{1}{5} \times \frac{2}{7}$ **[1]**

b $\frac{3}{7} \div \frac{5}{8}$ **[2]**

c $\frac{5}{12} \times \frac{6}{15}$ **[2]**

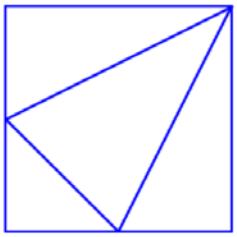
d $\frac{4}{9} \div \frac{40}{27}$ **[2]**

***16.** Evaluate the following:

a $2\frac{1}{5} + 5\frac{7}{8}$ **[2]**

b $1\frac{2}{3} \div 4\frac{2}{5}$ **[2]**

***17** I drew this picture by drawing a line from the top right corner of a square to the midpoint of each of the opposite sides. Then I joined these two midpoints with another line. What fraction of the square is the triangle in the middle? **[2]**



18. Match the following words to their definitions with a line

Denominator	◆A fraction whose numerator is larger than the denominator.	**[1]**
Reciprocal	◆A number made up of a whole number and a fraction.	**[1]**
Mixed numeral	◆The number below the line in a fraction.	**[1]**
Numerator	◆The number above the line in a fraction.	**[1]**
Improper fraction	◆When a fraction is 'flipped'.	**[1]**

<u>TIME</u> (34 marks) Show all necessary working

1. Change the following units of time:

a. 3 hours = _____ minutes **[1]**

b. 175 minutes = _____ hours and _____minutes **[1]**

c. 2 days = _____ hours **[1]**

d. 5 weeks = _____ days **[1]**

e. 20 minutes = _____ seconds **[1]**

f. 69 hours = _____ days _____ hours **[2]**

g. 5 days = _____ minutes **[2]**

2. Wendy is asked the question: "How many weeks are there in one month?" She replies: "There are 4 weeks in one month." Do you agree with her? Why/ Why not? **[2]**

3. Write the following in 24 hour time:

a. 6:35 am = _____ **[1]**

b. 7:18 pm = _____ **[1]**

4. Write the following in am/ pm time:

a. 2305 = _____ **[1]**

b. 0556 = _____ **[1]**

5. What time is it 2 hours and 18 minutes after 7:45 am? **[1]**

6. If I leave for school at 0815 and return home at 1540, exactly how long have I been away from home? **[2]**

7. My train comes at 10:23. How many minutes do I have before my train comes? **[2]**

8. I need to catch a train at 4:20 pm. It takes me exactly 23 minutes to walk to the train station from my house. What is the latest time should I leave my house to make it there on time? **[1]**

9. How many years old is a person now if they were born on the 12th of December, 1995? **[1]**

10. In year 7, you have four NAPLAN tests lasting 45 mins, 40 mins, 65 mins and 60 mins. How long do you spend in total sitting NAPLAN tests? (Write your answer in hours and minutes.) **[2]**

11. Look at the Bus Timetable (on the back page of this test) and answer the following questions about it:

12. Look at the Australian Time Zones diagram (on the back page of this test) and answer the following questions about it:

a. What time does the first bus of the day leave Earl Shilton, Library? **[1]**

b. When does the first bus after 0700 leave Nuneaton, Bus Station? **[1]**

c. i) There is a bus that leaves Barwell, Square at 0927. What time does it get to Leicester, St. Margaret's Bus Stn? **[1]**

ii) How long does that bus take to get from Barwell, square to Leicester, St. Margaret's Bus Stn? **[1]**

***d.** The hotel I am staying at is a 15 minute walk from Mostyn Street. I need to be at the hotel to meet a friend at 8:00pm. At what time is the last bus I can catch from Harrowbrook Road to make it in time to meet my friend? **[2]**

a. When it is not daylight savings time, what time is it in Perth when it is 5am in Sydney? **[1]**

b. When it is daylight savings time, what time is it in Adelaide when it is 12:30pm in Hobart? **[1]**

***c.** I am on holidays in January in Perth and I need to make a call to my Grandma in Brisbane to wish her happy birthday. I know she goes to bed at 9:30pm and we usually talk for about 20 mins. What is the latest time, in Perth time, that I can call her? **[2]**

END OF EXAM