SECTION I

10 marks
Attempts Questions 1-10
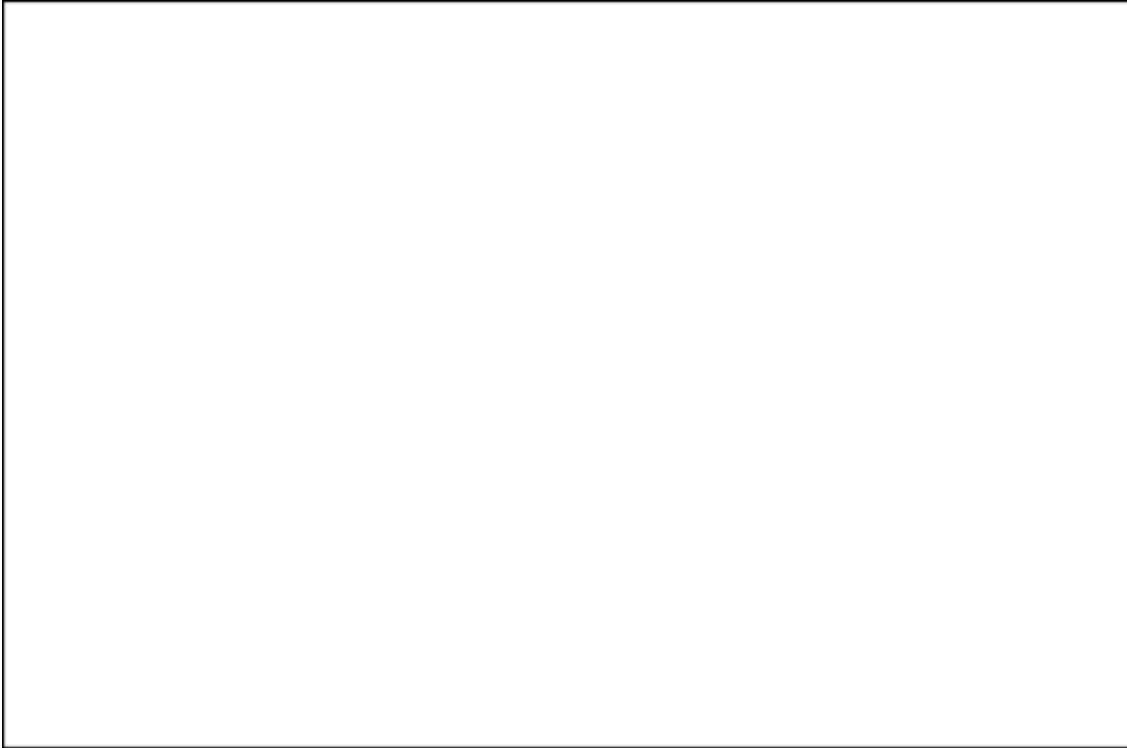**Allow about 10 minutes for this section**

Instructions
- Answer the questions in the space provided. These spaces provide guidance for the expected length of response
- Show all relevant working in questions involving calculations

1. Matt thought that a it would take $\frac{3}{10}$ hr to reach Nel's house but the actual journey took $\frac{2}{5}$ hr longer. How long did the actual journey take?

2. The annual goal of a company is to have a sale of $150 000. If it has a sale of $\frac{3}{10}$ of its goal on the first quarter and $\frac{1}{5}$ of its goal on the second quarter. How much does it need to sell in the fourth quarter if $\frac{1}{3}$ of the remaining amount is made on the third quarter?

3. Steve, Louise, and Bryce are friends. Steve has $\frac{1}{5}$ of money that Louise has. Bryce has $\frac{2}{3}$ of money Steve has. If they all together have $600. How much money do Steve, Luoise, and Bryce have separately?

4. Denise needs to make 40 dresses in four days. She made $\frac{1}{5}$ of the number of dresses on Monday while ¼ of the remaining dresses on Tuesday. How many dresses does she need to make on Thursday if she already made 2/3 of the remaining dresses on Wednesday?

5. A submarine at 33 feet below sea level suddenly moves about 7 feet. At what depth is the submarine located now?

6. Marcus had 300 dollars. He loaned 105 dollars to a friend, spent 63 dollars, and received his 150 dollars' paycheck from work. How much money does he have now?

7. Tessa reported losses of $275 each day for five days in her coffee shop while it gains $375 for three days. Did the company gain or loss for the last 8 days? By how much?

8. During one week, Lyle's scores on the seven 50 item science quizzes are the following: First quiz is 45 points, second quiz rose 2 points, third quiz dropped 8 points, fourth quiz rose 3 points, fifth quiz dropped 7 points, sixth quiz rose 4 points, and in seventh quiz dropped 6 points. What is his average score in the science quizzes?

9. A number is added to -14 is 45. Divide this number by 9. Then multiply by -14. And subtract the product to $\frac{3}{4}$ of 16. What is the initial and final number?

10. Zachary decided to go for a drive in his car. He started out at 10 miles per hour (mph). He then accelerated 15 mph down his street. Then, to get on the highway, he accelerated another 20 miles per hour. A car was going slow in front of him so he slowed down 15 mph. He then goes off the highway, so he slowed down another 17 miles per hour. At what speed is he driving?
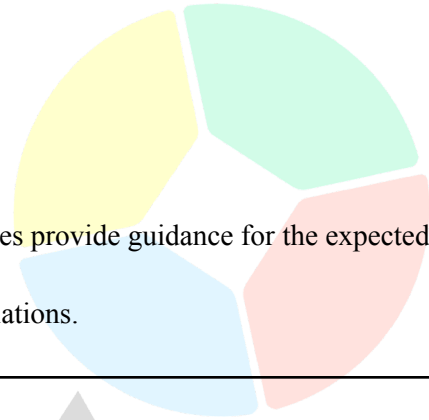
SECTION II

20 marks
Attempts Questions 11 - 20
Allow about 20 minutes for this section

Instructions
- Answer the questions in the space provided. These spaces provide guidance for the expected length of response
- Show all relevant working in questions involving calculations.
- Find the slope and y-intercept of the equation

11. $y = 4x + 7$

slope: _____

y-intercept: _____

12. $3y = x - 15$

slope: _____

y-intercept: _____
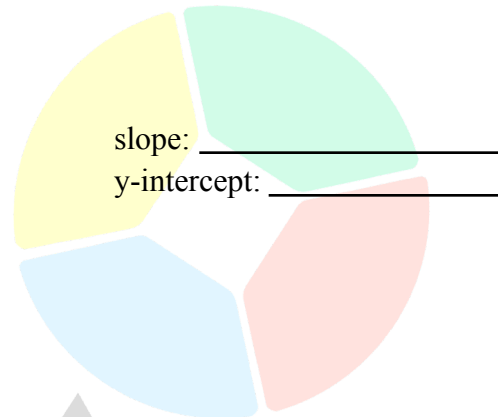
13. $5y = 4x + 20$

slope: _____

y-intercept: _____

14. $y = \frac{3}{7}x + 8$

slope: _____

y-intercept: _____

15. $3y + 5x = 6$

slope: _____

y-intercept: _____

16. $4x = -5y + 7$

slope: _____

y-intercept: _____

17. $2y = x + 1$

slope: _____

y-intercept: _____

18. $7y - 5 = 3x + 4$

slope: _____

y-intercept: _____

19. $y = 5x + 2$

slope: _____

y-intercept: _____

20. $3x + 2y = 7 + (-4)$

slope: _____

y-intercept: _____

SECTION III

10 marks
Attempts Questions 21 - 30
Allow about 10 minutes for this section

Instructions
- Answer the questions in the space provided. These spaces provide guidance for the expected length of response
- Show all relevant working in questions involving calculations.
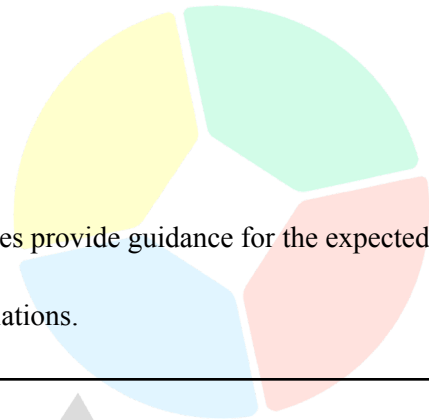- Factor the following quadratic equations

21. $6a^2 + 18a + 12$
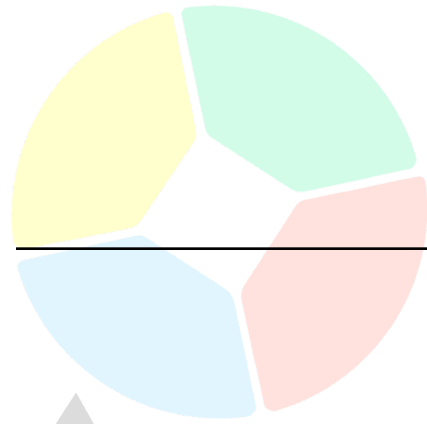
22. $12a^2 - 22a - 14$

23. $x^2 - 3a - 28$

24. $3a^2 - 3a - 18$

25. $4b^2 + 18b + 14$

26. $x^2 + 6x + 8$

27. $x^2 + 7x + 10$

28. $x^2 - 10x - 24$

29. $6c^2 + 22c + 12$

30. $x^2 - 12x + 35$