

Name: \_\_\_\_\_

**ASM Tuition Academy**  
**Parallel and Perpendicular Lines**

**Instructions:**

- Use **black** ink or ball-point pen.
- Answer all questions.
- Answer the questions in the spaces provided  
- there may be more space than you need.
- Diagrams are **NOT** accurately drawn, unless otherwise indicated.
- You must **show all you're working out**.

**Information:**

- The marks for each question are shown in brackets  
- use this as a guide as to how much time to spend on each question.

**Advice:**

- Read each question carefully before you start to answer it.
- Keep an eye on time.
- Try to answer every question.
- Check your answers if you have time at the end.

1. Write down the equation of a line parallel to  $y = 4x + 3$ .

\_\_\_\_\_

(Total for question 1 is 1 mark)

---

2. Write down the equation of a line parallel to  $y = \frac{1}{3}x + 6$  which passes through (0, 2).

\_\_\_\_\_

(Total for question 2 is 2 marks)

---

3. Write down the equation of a line parallel to  $y = -x + 3$  which passes through (0, -3).

\_\_\_\_\_

(Total for question 3 is 2 marks)

---

4. Write down the equation of a line perpendicular to  $y = 2x + 7$ .

\_\_\_\_\_

(Total for question 4 is 1 mark)

---

5. Write down the equation of a line perpendicular to  $y = \frac{1}{2}x - 5$  which passes through (0, 8).

\_\_\_\_\_

(Total for question 5 is 2 marks)

---

6. Write down the equation of a line perpendicular to  $y = -\frac{4}{3}x - 2$  which passes through (0, -6).

\_\_\_\_\_

(Total for question 6 is 2 marks)

---



7. Find the equation of the line parallel to  $3y - 4x + 1 = 0$  which passes through  $(0, 3)$ .

---

(Total for question 7 is 2 marks)

---

8. Find the equation of the line parallel to  $2x + 6y = 12$  which passes through  $(0, -4)$ .

---

(Total for question 8 is 2 marks)

---

9. Find the equation of the line perpendicular to  $7y = 3x - 2$  which passes through  $(0, 5)$ .

---

(Total for question 9 is 2 marks)

---

**10. Here are the equations of five straight lines.**

- Line A**       $y = 3x - 5$
- Line B**       $2y = x + 3$
- Line C**       $4y = 3x - 2$
- Line D**       $3y = 2x - 2$
- Line E**       $3y = 9x - 1$

**Two of these lines are parallel.**

**Write down the two parallel lines.**

**Line: ..... and Line: .....**

**(Total for question 10 is 1 mark)**

---

**11. Here are the equations of five straight lines.**

- Line A**       $y + 2x = 1$
- Line B**       $2y = x + 6$
- Line C**       $y + 7x = 3$
- Line D**       $y = 2x - 8$
- Line E**       $7y = x + 1$

**Two of these lines are perpendicular.**

**Write down the two perpendicular lines.**

**Line: ..... and Line: .....**

**(Total for question 11 is 1 mark)**

---

**12. Line A passes through the points (1, 2) and (10, 5)**

**Find the equation of the line parallel to A that passes through (5, 2)**

---

**(Total for question 12 is 3 marks)**

---

**13. Line A passes through the points (2, 4) and (3, 1)**

**Find the equation of the line perpendicular to A that passes through (-1, 4)**

---

**(Total for question 13 is 2 marks)**

---

**14. Line A passes through the points (-2, 3) and (3, 5)**

**Find the equation of the line parallel to A that passes through (4, 6)**

---

**(Total for question 14 is 3 marks)**

---

**15. Line A passes through the points (10, -5) and (9, -2)**

**Find the equation of the line perpendicular to A that passes through (4, 1)**

---

**(Total for question 15 is 2 marks)**

---

- 16. Line A passes through the points (1, 2) and (10, 5)**  
**Line B passes through the points (7, 4) and (1, 2)**  
**Show that line A and Line B are parallel.**

---

**(Total for question 16 is 4 marks)**

---

- 17. Line A passes through the points (1, 3) and (5, 4)**  
**Line B passes through the points (8, 6) and (9, 10)**  
**Show that line A and Line B are perpendicular**

---

**(Total for question 17 is 4 marks)**

---

- 18. Line A passes through the points (2, 3) and (4, 5)**  
**Line B passes through the points (5, 7) and (8, k)**  
**Line A and Line B are parallel**  
**Find the value of k**

---

**(Total for question 17 is 4 marks)**

---

- 19. Line A passes through the points (-4, -2) and (-1, 8)**  
**Line B passes through the points (-3, -2) and (k, 4)**  
**Line A and Line B are perpendicular**  
**Find the value of k**

---

**(Total for question 17 is 4 marks)**

---