98. Finding the Equation of a Straight Line

Practice Questions:

1. A line passes through the points (2, 3) and (6, 7). Calculate the gradient of the line.

2. A line passes through the points (–4, 1) and (2, 4). Calculate the gradient of the line.

3. Straight lines are parallel if they have the same gradient. If one line passes through the points (–3, –2) and (3, 6), and another line passes through the points (0, –1) and (2, 3), are the lines parallel?

4. Straight lines are parallel if they have the same gradient. If one line passes through the points (0, 2) and (4, 6), and another line passes through the points (–2, –2) and (2, 2), are the lines are parallel?

5. Straight lines are parallel if they have the same gradient. If one line passes through the points (0, –3) and (3, 3), and another line passes through the points (–2, –1) and (4, 11), are the lines are parallel?

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Practice Questions:

6. A line passes through the points (0, 1) and (–2, 5). Find the equation of the line. Write your answer in the form y = mx + c.

7. A line passes through the points (1, 3) and (5, 7). Find the equation of the line. Write your answer in the form y = mx + c.

8. A line passes through the points (2, –1) and (–2, –5). Find the equation of the line. Write your answer in the form y = mx + c.

9. A line passes through the points (–3, 4) and (3, –2). Find the equation of the line. Write your answer in the form y = mx + c.

10. A line passes through the points (0, 0) and (5, -10). Find the equation of the line. Write your answer in the form y = mx + c.
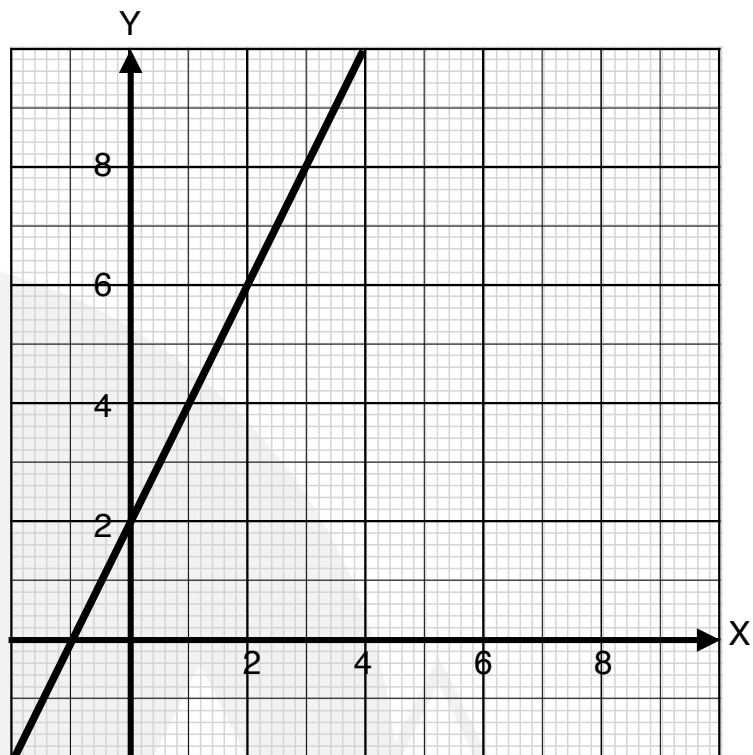
98. Finding the Equation of a Straight Line

Scenario Questions:

1. The diagram shows a straight line on a set of axes.

a) Find the equation of the straight line in the form y = mx + c.
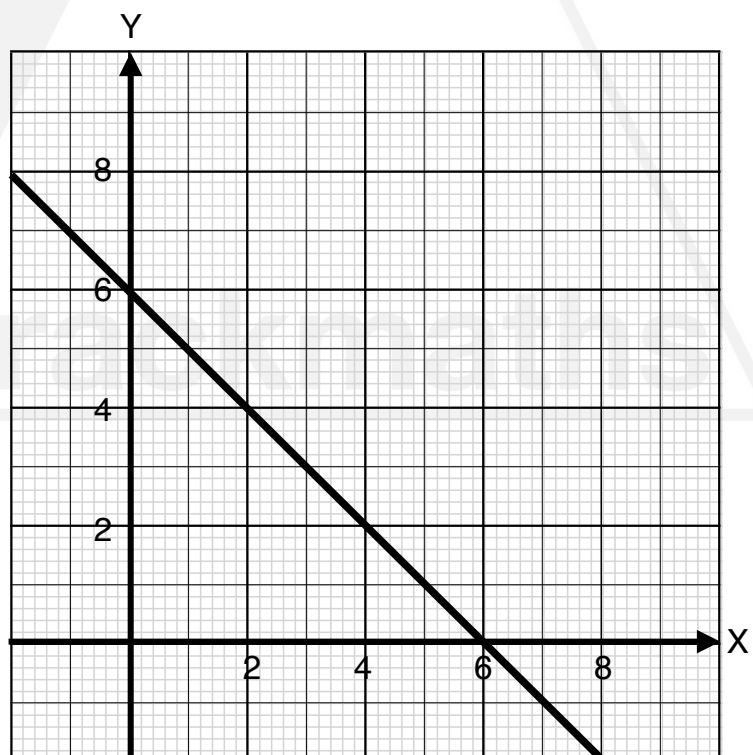
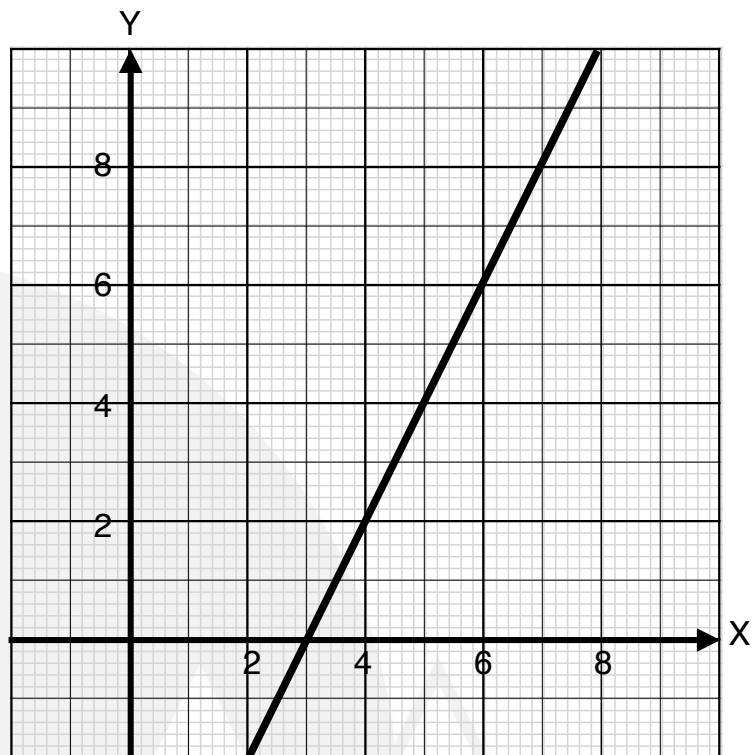b) Check your equation by substituting x = 3 and confirm it matches the value of y from the graph.

2. The diagram shows a straight line on a set of axes.

a) Find the equation of the straight line in the form y = mx + c.

b) Check your equation by substituting x = 1 and confirm it matches the value of y from the graph.

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Scenario Questions:

3. The diagram shows a straight line on a set of axes.

a) Find the equation of the straight line in the form y = mx + c.

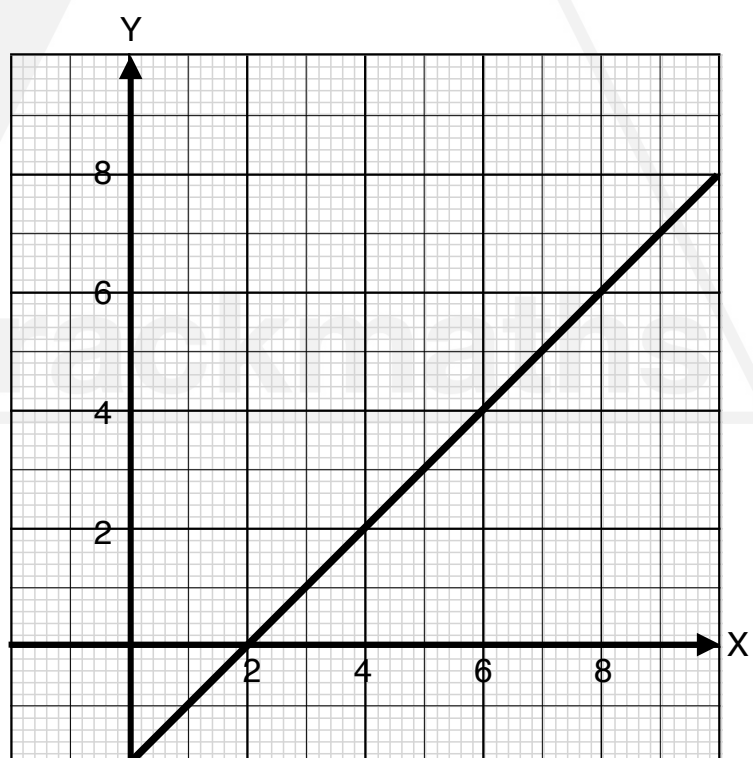b) Check your equation by substituting x = 5 and confirm it matches the value of y from the graph.

4. The diagram shows a straight line on a set of axes.

a) Find the equation of the straight line in the form y = mx + c.

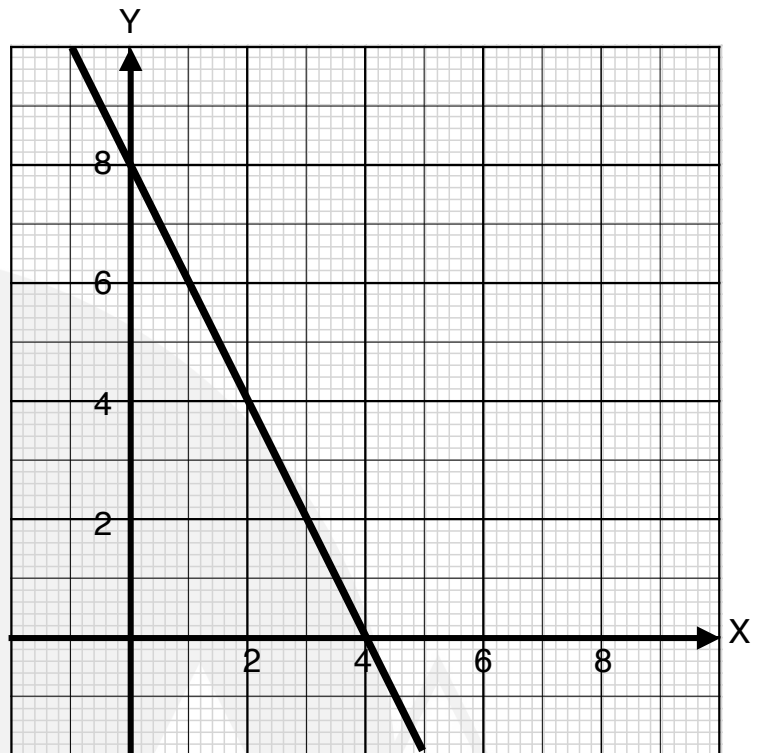b) Check your equation by substituting x = 4 and confirm it matches the value of y from the graph.

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Scenario Questions:

5. The diagram shows a straight line on a set of axes.

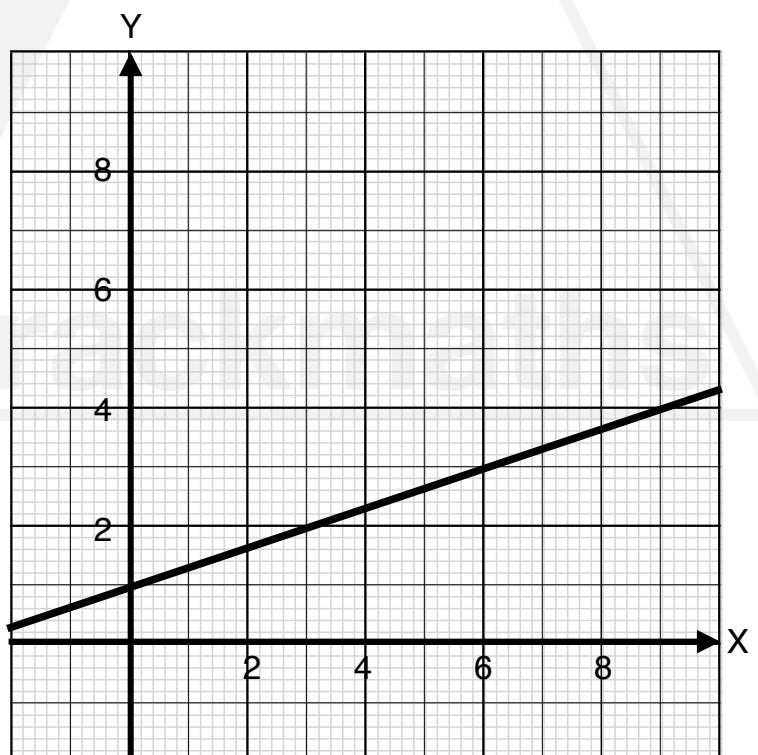a) Find the equation of the straight line in the form y = mx + c.

b) Check your equation by substituting x = 2 and confirm it matches the value of y from the graph.

6. The diagram shows a straight line on a set of axes.

a) Find the equation of the straight line in the form y = mx + c.

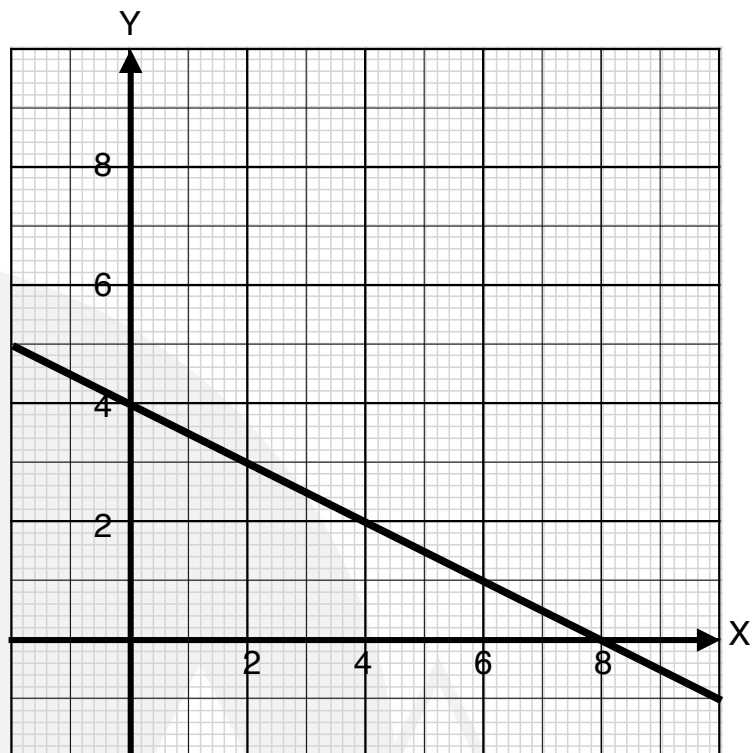b) Check your equation by substituting x = 6 and confirm it matches the value of y from the graph.

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Scenario Questions:

7. The diagram shows a straight line on a set of axes.

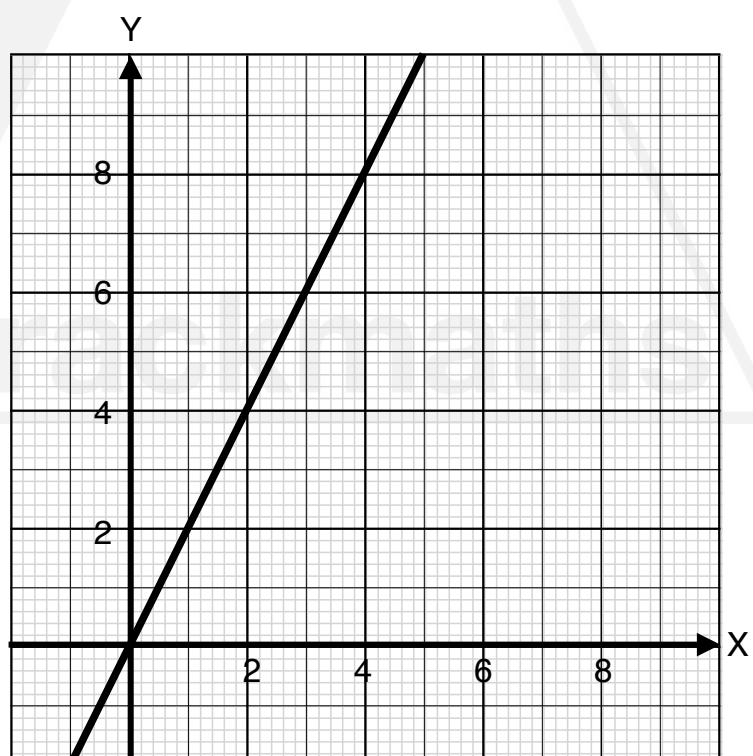a) Find the equation of the straight line in the form y = mx + c.

b) Check your equation by substituting x = 7 and confirm it matches the value of y from the graph.

8. The diagram shows a straight line on a set of axes.

a) Find the equation of the straight line in the form y = mx + c.

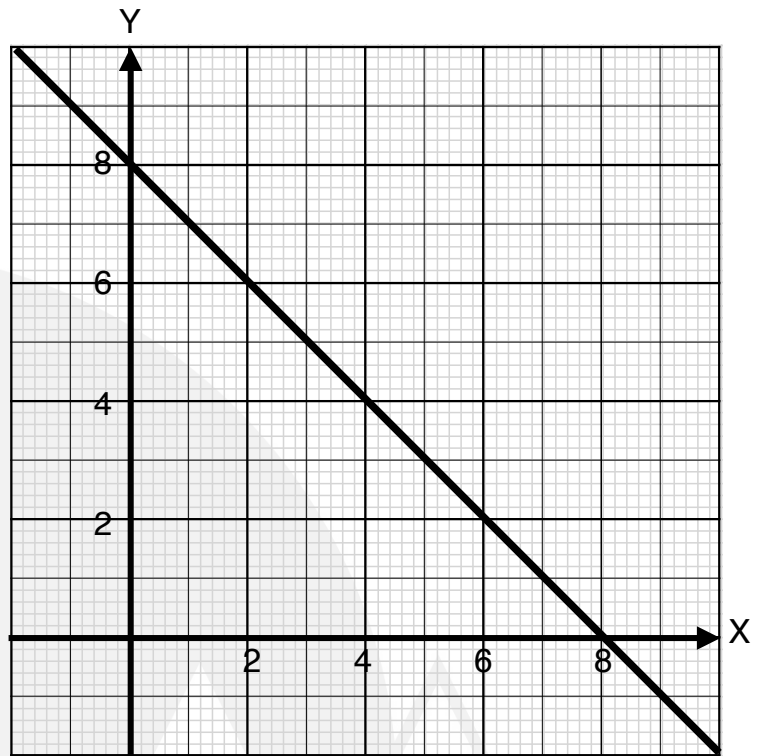b) Check your equation by substituting x = 0 and confirm it matches the value of y from the graph.

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Scenario Questions:

9. The diagram shows a straight line on a set of axes.

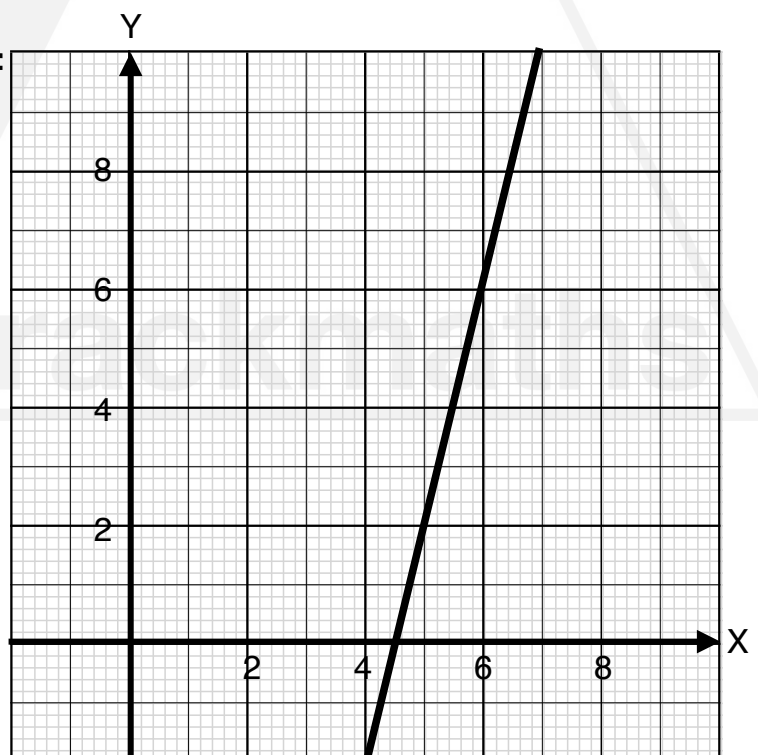a) Find the equation of the straight line in the form y = mx + c.

b) Check your equation by substituting x = 7 and confirm it matches the value of y from the graph.

10. The diagram shows a straight line on a set of axes.

a) Find the equation of the straight line in the form y = mx + c.

b) Check your equation by substituting x = 5 and confirm it matches the value of y from the graph.

ANSWERS

Topic 98. Finding the Equation of a Straight Line

Practice Questions:

1. 1
2. 1/2
3. No
4. Yes
5. Yes

6. $y = -2x + 1$
7. $y = x + 2$
8. $y = x - 3$
9. $y = -x + 1$
10. $y = -2x$

Scenario Questions:

1. $y = 2x + 2, y = 8$
2. $y = -x + 6, y = 5$
3. $y = 2x - 6, y = 4$
4. $y = x - 2, y = 2$
5. $y = -2x + 8, y = 4$

6. $y = (1/3)x + 1, y = 3$
7. $y = -(1/2)x + 4, y = 1/2$
8. $y = 2x , y = 0$
9. $y = -x + 8, y = 1$
10. $y = 5x - 20, y = 2$