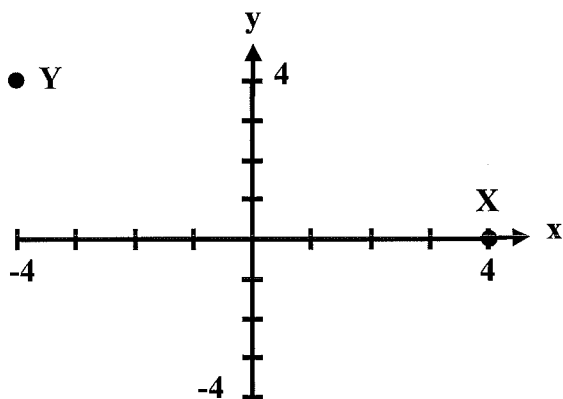


# GRAPHS

## YEARS 9 AND 10 REVIEW

1



The co-ordinates of the points X and Y are:

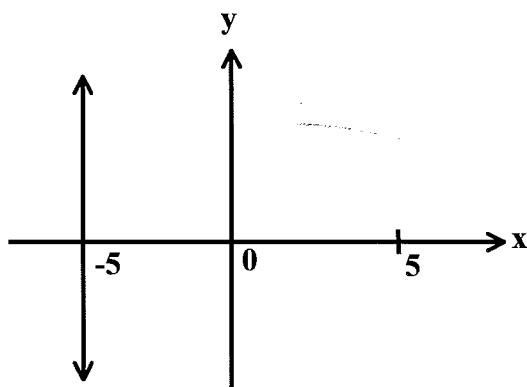
- A (0, 4) and (4, -4)
- B (4, 0) and (4, -4)
- C (0, 4) and (-4, 4)
- D (4, 0) and (-4, 4)

2. The number needed to complete the table of values if the rule is  $y = 3x + 4$  is:

x	-2	0	6
y		4	22

- A -2                      B -14                      C 2                      D -10

3



The rule of the graph shown is:

- A  $x + y = -5$                       B  $y = -5$                       C  $x = -5$                       D  $y = x - 5$

4. Which one of the following points obeys the rule  $y = 3x$ ?

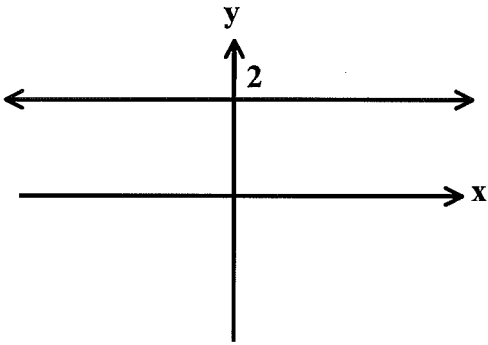
- A (0, 0)                      B (5, 8)                      C (24, 8)                      D (3, 1)

5. The point (2,6) is on all but one of the following graphs. Which one is it?

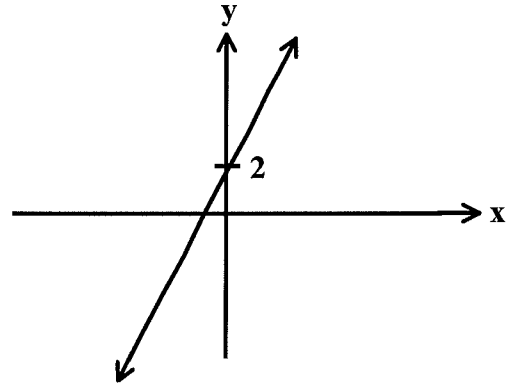
- A  $y = x + 4$                       B  $x = 2$                       C  $x = 6$                       D  $y = 3x$

6. Which one of the graphs might represent the rule  $y = 2x$ ?

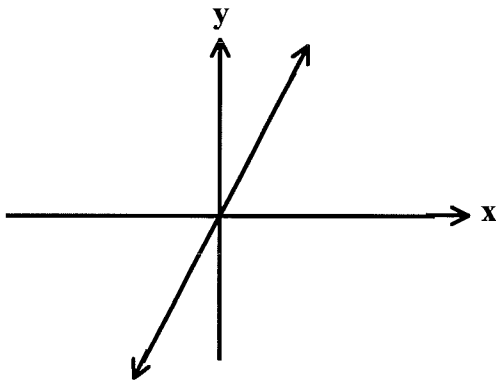
A



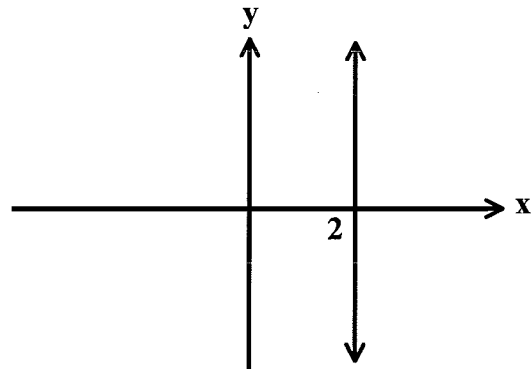
B



C



D



7. What might be the rule which leads to this table of values?

x	0	1	2	3
y	3	6	9	12

A  $y = x + 3$

B  $y = 6x$

C  $y = x + 5$

D  $y = 3x + 3$

8. The rule of the y axis is:

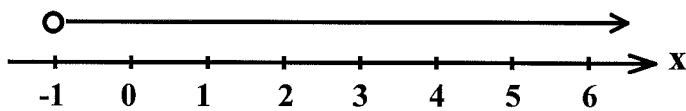
A  $x = 0$

B  $y = 0$

C  $y = x$

D An axis does not have a rule.

9



The rule of this graph is

A  $x < -1$

B  $x \leq -1$

C  $x > -1$

D  $x \geq -1$

10. Which one of the following lines will be a vertical line?

A  $y = 4$

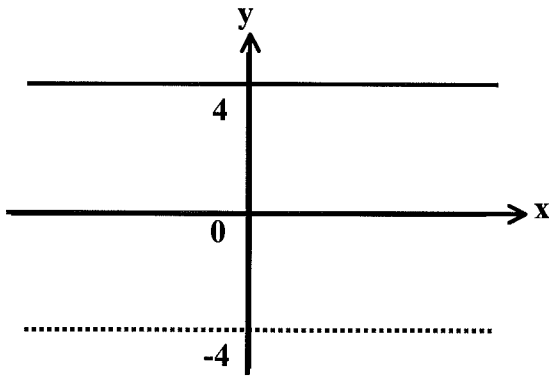
B  $y = 100x$

C  $x = -10$

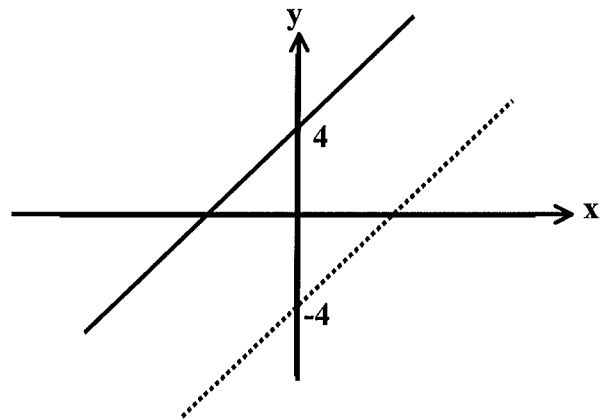
D  $y = 3x - 3$

11 If  $y = 4x$  (unbroken line) is drawn on the same axes as  $y = -4x$  (dotted line), then they might look like:

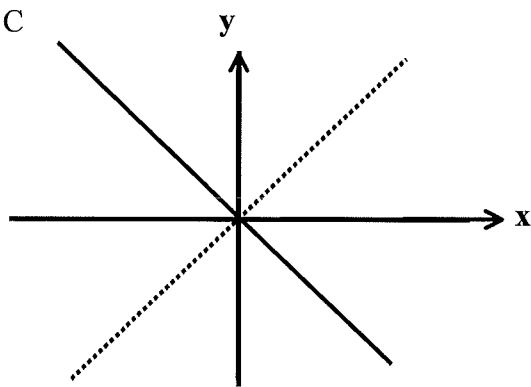
A



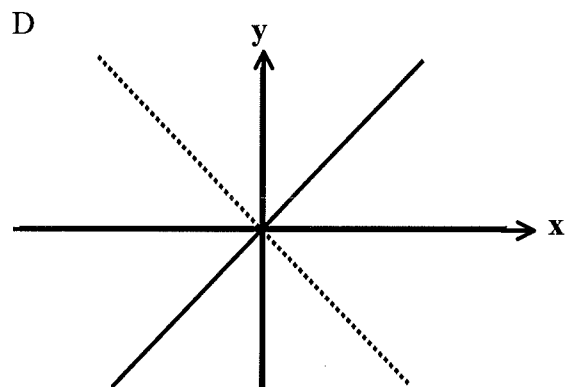
B



C

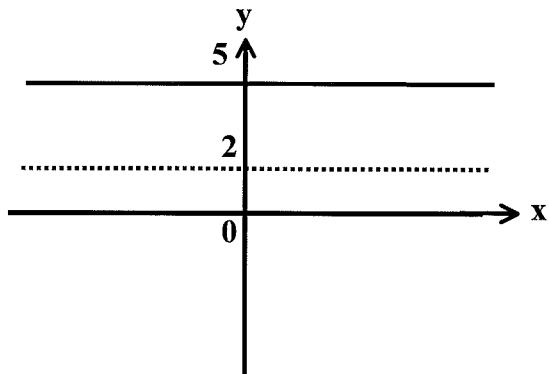


D

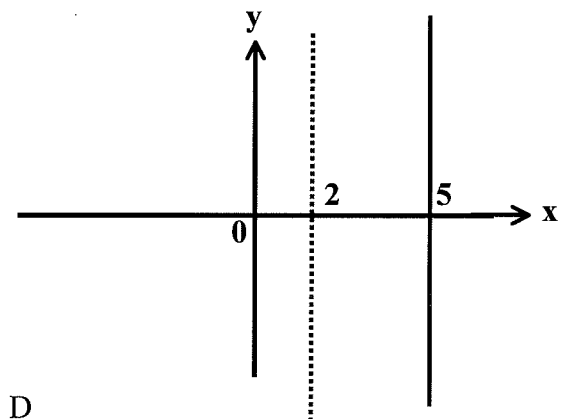


12 If  $y = 5x$  (unbroken line) is drawn on the same axes as  $y = 2x$  (dotted line) then they might look like:

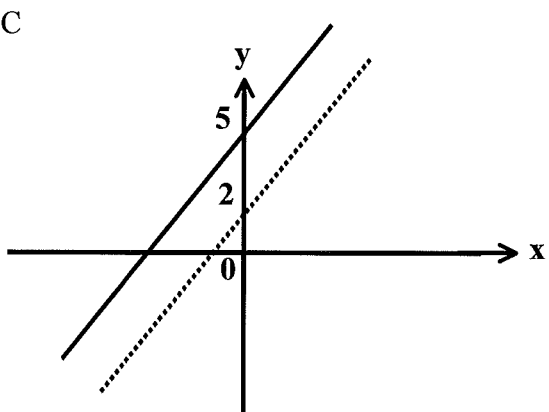
A



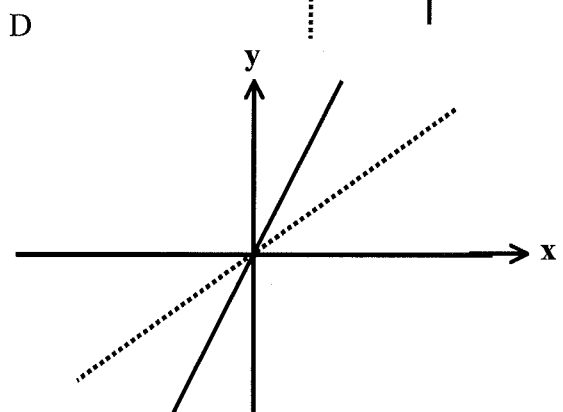
B



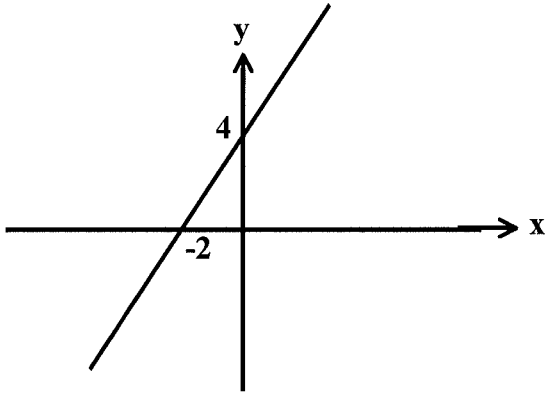
C



D



13

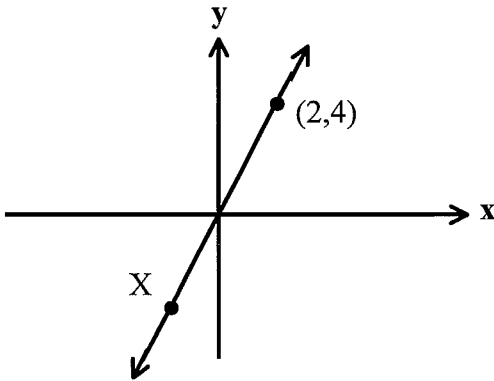


The rule of this graph might be:

- A  $y = 4x$
- C  $y = 2x + 4$

- B  $y = 4x - 2$
- D  $y = -2x + 4$

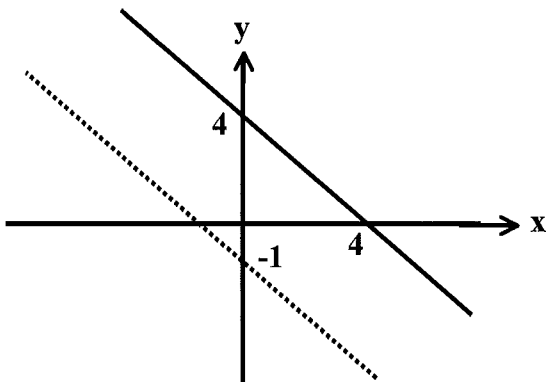
14



The co-ordinates of x might be:

- A  $(-2, -1)$
- B  $(-1, -2)$
- C  $(-\frac{1}{2}, -\frac{1}{4})$
- D  $(-1, -1\frac{1}{2})$

15



The rule of the dotted line, which is parallel to the unbroken line, might be:

- A  $y = x - 1$
- B  $y = -x - 1$
- C  $y = -4x - 1$
- D There is insufficient information to determine the equation of this line.

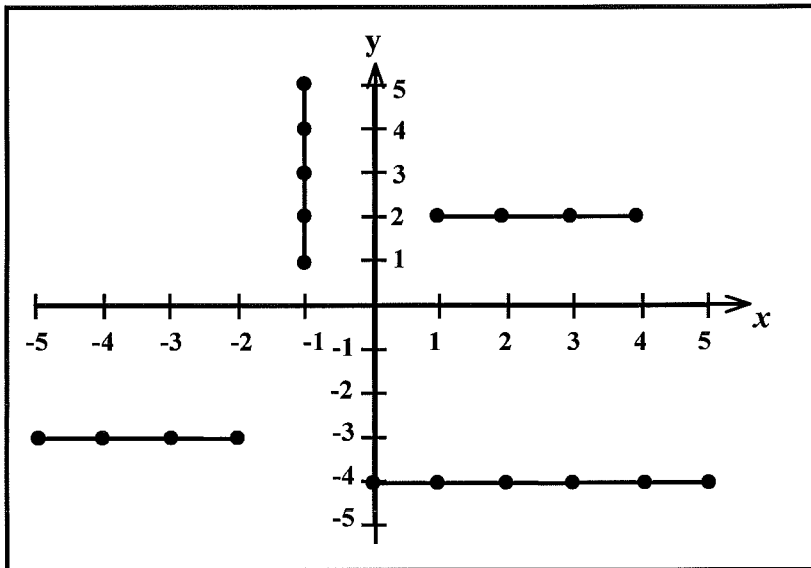
16. Which one of these graphs will cross the y - axis at 6?

- A  $y = 6x$
- C  $y = x + 6$
- B  $x = 6$
- D  $y = 3x + 3$

17 Which one of these graphs will be the steepest, if all the graphs are drawn on the same axes:

- A  $y = 2x$
- C  $y = 200$
- B  $y = x + 100$
- D  $y = x - 400$

18



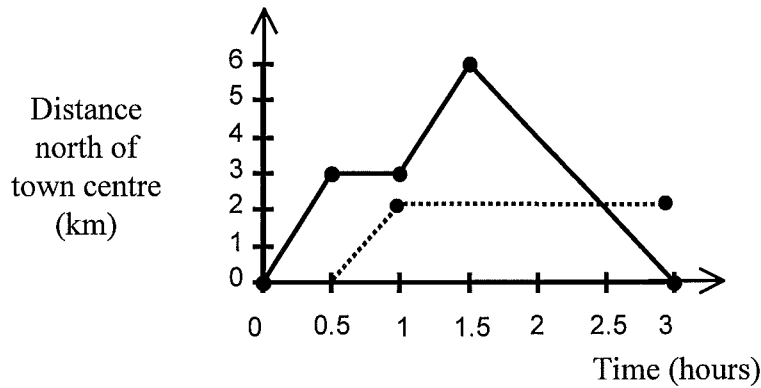
In a game of battleships, the above positions were occupied. There are 3 lines which contain exactly 5 successful “hits”. Which of the following is NOT one of these lines?

- A  $y = 2$
- B  $x = 1$
- C  $x = -1$
- D  $y = -4$

19 Which pair of graphs would cross one another at the point (0, 10)?

- A  $y = 10$  and  $y = 10x$
- B  $y = x + 10$  and  $y = 10x$
- C  $y = x + 10$  and  $y = 5x + 10$
- D  $y = 5x + 10$  and  $x = 10$

THE NEXT 2 QUESTIONS REFER TO THE INFORMATION BELOW



This unbroken graph represents Gita’s training run along a straight road which began at a town’s centre, and was in a northerly direction. The dotted line represents Tori’s movements over the same time.

20 The speed at which Gita ran in the first half hour was:

- A  $\frac{1}{2}$  kph
- B 3 kph
- C  $3\frac{1}{2}$  kph
- D 6 kph

21 Which one of the following statements is INCORRECT?

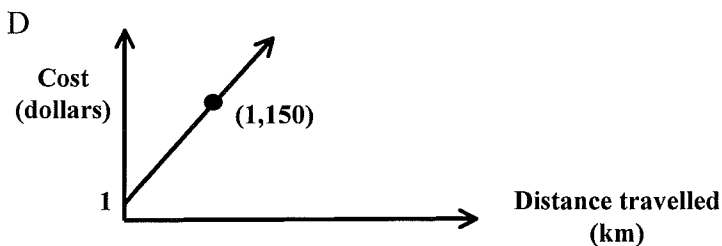
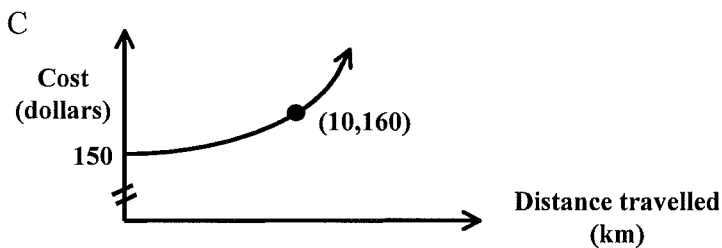
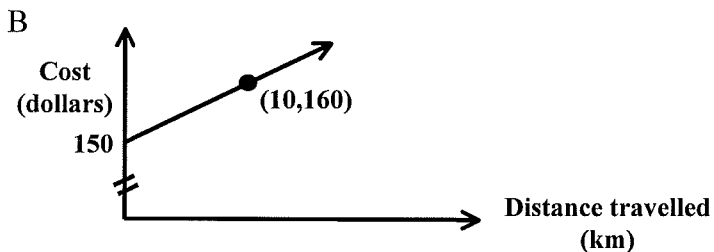
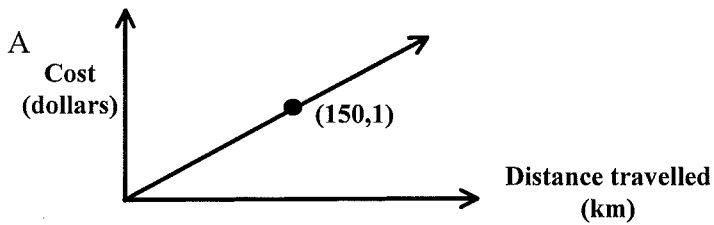
- A Gita's average speed over her trip was 4 kph.
- B Gita ran more slowly on the journey back to the centre than at the other stages.
- C When Tori and Gita met, Tori was running along another road towards the East.
- D Tori only went 2 km and was still resting along the road when Gita saw her.

22 The rule of certain graph is:  $y = 5x - 10$

Which statement about this graph is TRUE?

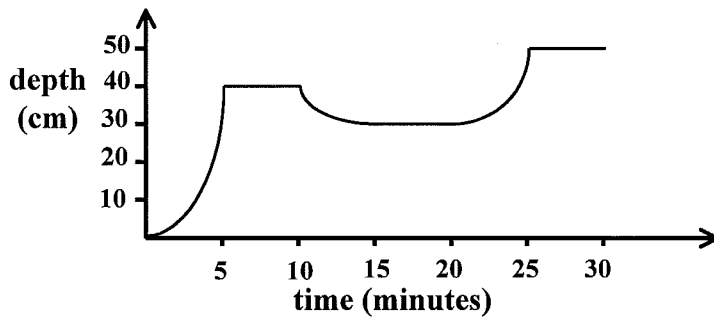
- A The point (5, -10) will be on the graph.
- B The graph will be parallel to the graph  $y = x - 10$ , if drawn on the same axes.
- C The graph will cross the y - axis at 5.
- D The graph will cross the x - axis at 2.

23 If you go on a holiday to the Whitsundays, you can hire a car at a certain place for \$150 initial costs, plus \$1 per km travelled. The graph which might represent the relationship between the cost and the distance you drive is:



THE NEXT 2 QUESTIONS REFER TO THE INFORMATION BELOW:

This graph represents the depth of water in a bath over time.



**24 In the first 5 minutes:**

- A The empty bath was filled at a faster and faster rate, by turning the tap on more and more to speed it up.
- B The bath was filled at a steady rate, like 20 litres per minute, until it was at the required depth.
- C The tap was turned full on to start with, then gradually turned off as the water got close to the top.
- D You can't tell how the bath was filled without also knowing the shape of the bath.

**25 An explanation for the rest of the graph could be:**

- A Someone in the bath started splashing a lot, to make bigger and bigger waves.
- B Someone got out and was replaced with someone bigger.
- C Someone got out and was replaced with someone smaller.
- D Water was let out, but the bath then was filled to overflowing.

