Year 9 Class 6 questions

Q1

Solve the equation to find a.

$12 + 8a = 100$

$a =$ ☐

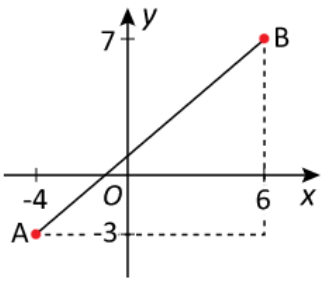
Q2

Solve the equation to find y.

$9y + 12 = 6y + 48$

$y =$ ☐

Q3

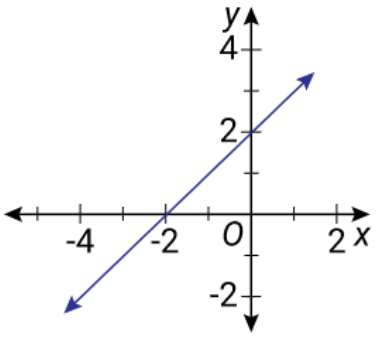


Find the length of the interval AB.

AB = ☐ (1 d.p.)

Q4

Which equation matches the graph?



- ○ $y = x + 2$
- ○ $y = 2x - 2$
- ○ $y = x - 2$
- ○ $y = 2x + 2$

Q5

The line $3x + 2y = 12$ cuts the x-axis at

- ○ (0,6)
- ○ (6,0)
- ○ (4,0)
- ○ (-4,0)

Q6

Solve the equation to find a.

$25 = 3a + 10$

$a =$ ☐

Q7

Solve the equation to find a.

$131 = 11 - 15a$

$a =$ ☐

Q8

Solve the equation to find z.

$-30 - 4z = 72 - 2z$

$z =$ ☐

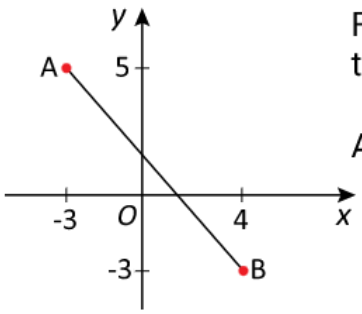
Q9

Solve the equation to find b.

$20 + 3b = 13 - 7b$

$b =$ ☐

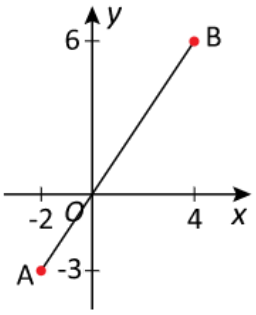
Q10



Find the length of the interval AB.

AB = ☐ (1 d.p.)

Q11

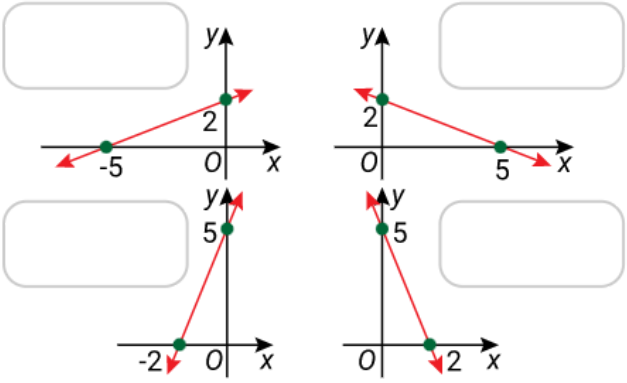


Find the length of the interval AB.

AB = ☐ (1 d.p.)

Q12

Match the graphs with their equations.



$y = \frac{2}{5}x + 2$

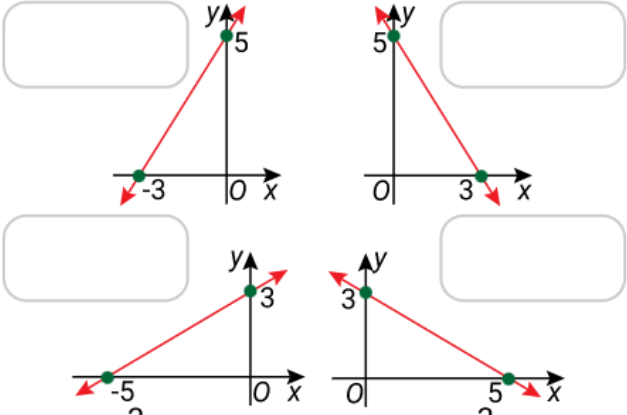
$y = -\frac{5}{2}x + 5$

$y = \frac{5}{2}x + 5$

$y = -\frac{2}{5}x + 2$

Q13

Match the graphs with their equations.



$y = -\frac{3}{5}x + 3$

$y = \frac{3}{5}x + 3$

$y = \frac{5}{3}x + 5$

$y = -\frac{5}{3}x + 5$

Q14

Which line cuts the x-axis at $\frac{2}{5}$?

- ○ $y = 2x - 5$
- ○ $2x + 3y - 5 = 0$
- ○ $y = 5x + 2$
- ○ $10x + y - 4 = 0$

Q15

Which line cuts the x-axis at $2\frac{1}{3}$?

- ○ $y = 7 - 3x$
- ○ $3x - 4y = 2$
- ○ $5x + y = 11$
- ○ $4x + 3y - 7 = 0$

Q16

Solve the equation to find b.

$2b + 42 = 5b$

$b =$ ☐

Q17

Solve the equation to find y.

$4y - 36 = 5y$

$y =$ ☐

Q18

Solve the equation to find c.

$189 - 6c = 15c$

$c =$ ☐

Q19

Solve the equation to find a.

$5a + 12 + a = 4a + 20$

$a =$ ☐

Q20

Solve the equation to find b.

$$8b+8-3b=24+3b$$

$b =$ ☐

Q21

Solve the equation to find c.

$$8c+15-3c=36+2c$$

$c =$ ☐

Q22

Find the distance between the points A(-4,2) and B(2,-3).
HINT: A sketch may help.

AB = ☐ (1 d.p.)

Q23

Find the distance between the points A(8,-2) and B(-2,9).
HINT: A sketch may help.

AB = ☐ (1 d.p.)

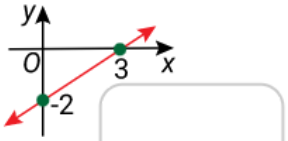
Q24

Find the distance between the points A(2,7) and B(0,-3).
HINT: A sketch may help.

AB = ☐ (1 d.p.)

Q25

Match the graphs with their equations.



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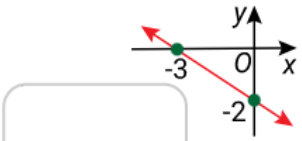

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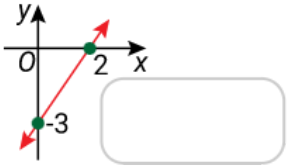

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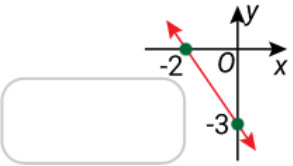

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$y = \frac{3}{2}x-3$

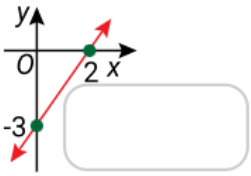
$y = -\frac{3}{2}x-3$

$y = \frac{2}{3}x-2$

$y = -\frac{2}{3}x-2$

Q26

Match the graphs with their equations.



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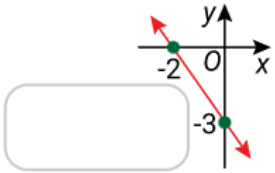

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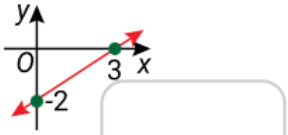

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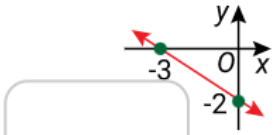

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$y = -\frac{2}{3}x-2$

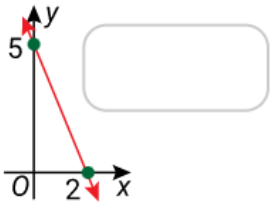
$y = \frac{3}{2}x-3$

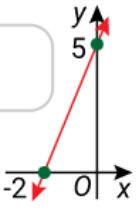
$y = \frac{2}{3}x-2$

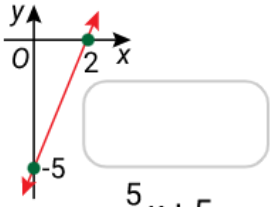
$y = -\frac{3}{2}x-3$

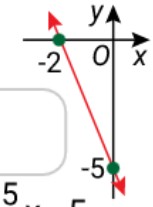
Q27

Match the graphs with their equations.









$y = -\frac{5}{2}x + 5$

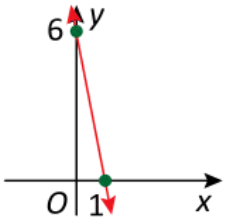
$y = \frac{5}{2}x - 5$

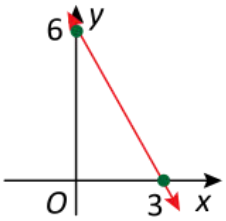
$y = \frac{5}{2}x + 5$

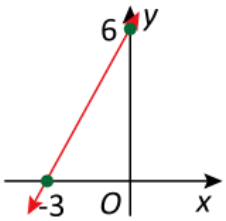
$y = -\frac{5}{2}x - 5$

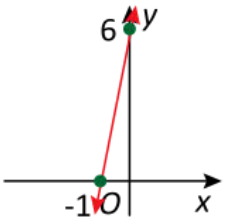
Q28

Choose the graph described by $2x + y - 6 = 0$.



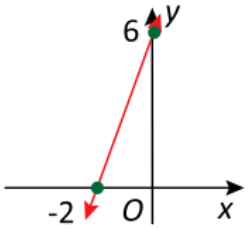


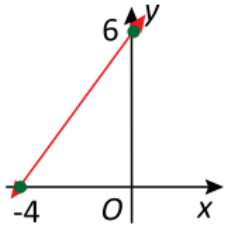


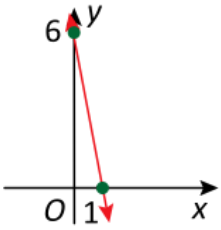


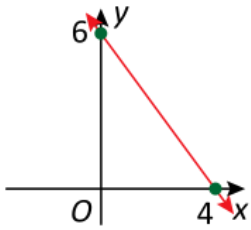
Q29

Choose the graph described by $3x + 2y - 12 = 0$.









Q30

Choose the graph described by $10x - 3y - 8 = 0$.