Year 8 Class 16 questions

Q1

Solve the equation to find c.

$$13 + 6c = -29$$

$c = \boxed{}$

Q2

Solve the equation to find b.

$$23 + 8b = 63$$

$b = \boxed{}$

Q3

Solve the equation to find y.

$$9y + 12 = 6y + 48$$

$y = \boxed{}$

Q4

Solve the equation to find z.

$$9z - 8 = 5z + 32$$

$z = \boxed{}$

Q5

A rectangle's length is 8 cm longer than its width. If its perimeter is 208 cm, find the width.

$\boxed{}$ cm

Q6

The graph shows $y = x + 3$ and $y = 2x + 2$.

For $y = x + 3$

when $y = 5$, $x = \boxed{}$

when $y = 0$, $x = \boxed{}$
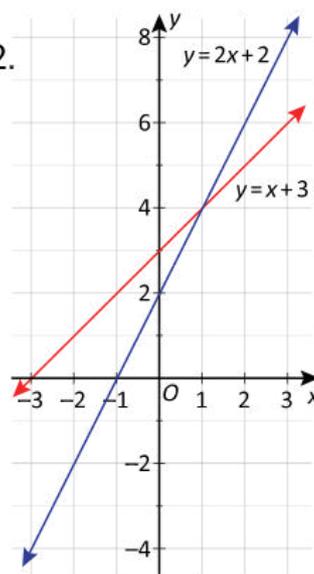
For $y = 2x + 2$

when $y = 8$, $x = \boxed{}$

when $y = 2$, $x = \boxed{}$

What is the point of intersection?

$\left(\boxed{} \right)$

Q7

Solve the equation to find b.

$$45 = 4b + 13$$

$b = \boxed{}$

Q8

Solve the equation to find a.

$$49 = 5a - 11$$

$a = \boxed{}$

Q9

Solve the equation to find b.

$$20 = 13 + 7b$$

$b = \boxed{}$

Q10

Solve the equation to find x.

$$40 - 5x = 3x - 16$$

$x = \boxed{}$

Q11

Solve the equation to find b.

$$20 + 3b = 13 - 7b$$

$b = \boxed{}$

Q12

Solve the equation to find z.

$$-67 - z = 93 + 9z$$

$z = \boxed{}$

Q13

3 times a number minus 12 is equal to
5 times the number plus 15.
Find the number.

$\boxed{}$

Q14

Stella is 4 years older than Maria. In 12 years,
Stella will be twice Maria's present age.
How old is Maria now?

$\boxed{}$

Q15

Leo is 5 years older than Pat. In 10 years,
Leo will be twice Pat's present age.
How old is Leo now?

$\boxed{}$

Q16

The graph shows
$y = x - 1$ and $y = 2 - 2x$.

For $y = x - 1$
when $y = 2$, $x = \boxed{}$
when $y = -3$, $x = \boxed{}$
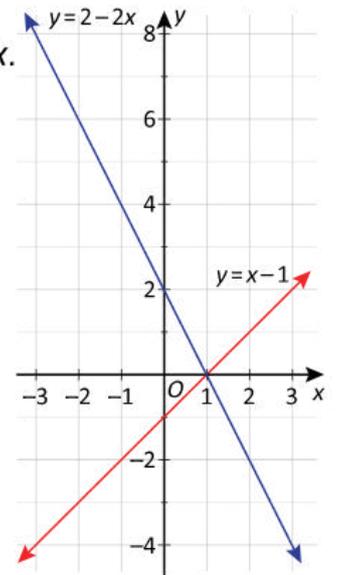
For $y = 2 - 2x$
when $y = 4$, $x = \boxed{}$
when $y = -4$, $x = \boxed{}$

What is the point
of intersection?

$\left(\boxed{} \right)$

Q17

The graph shows
$y = x + 5$ and $y = 2 - 2x$.

For $y = x + 5$
when $y = 6$, $x = \boxed{}$
when $y = 2$, $x = \boxed{}$
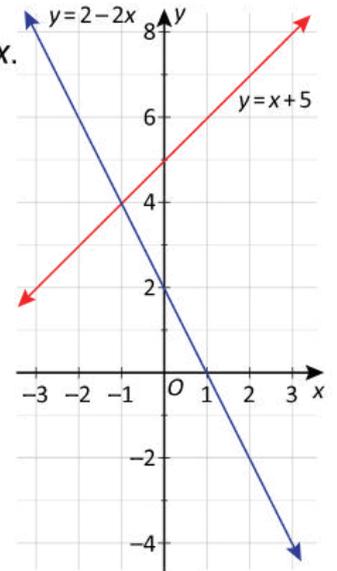
For $y = 2 - 2x$
when $y = 6$, $x = \boxed{}$
when $y = -2$, $x = \boxed{}$

What is the point
of intersection?

$\left(\boxed{} \right)$

Q18

The graph shows $y = x - 2$ and $y = 1 - 2x$.

For $y = x - 2$

when $y = 1$, $x = \boxed{}$

when $y = -4$, $x = \boxed{}$

For $y = 1 - 2x$

when $y = 5$, $x = \boxed{}$

when $y = 1$, $x = \boxed{}$
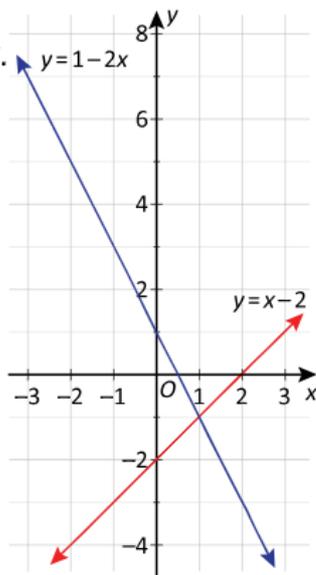
What is the point of intersection?

$\left(\boxed{} \right)$

Q19

Solve the equation to find b.

$$2b + 42 = 5b$$

$b = \boxed{}$

Q20

Solve the equation to find b.

$$72 - 5b = 3b$$

$b = \boxed{}$

Q21

Solve the equation to find b.

$$3b = 336 - 11b$$

$b = \boxed{}$

Q22

Solve the equation to find b.

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

$b = \boxed{}$

Q23

Solve the equation to find z.

$$z + 8 + 8z = 35 - z$$

$z = \boxed{}$

Q24

Solve the equation to find x.

$$5 - 3x + 5x = -8 + 6 + 9x$$

$x = \boxed{}$

Q25

Olivia is three times Daisy's age now. In 5 years time, Olivia will be twice Daisy's age then.

How old is Daisy now? $\boxed{}$

Q26

Emily is four times Katie's age now. In 12 years time, Emily will be twice Katie's age then.

How old is Emily now? $\boxed{}$

Q27

Ella is 12 years older than Sue and Lola is three times Sue's age. The sum of their ages is 57. How old is Lola?
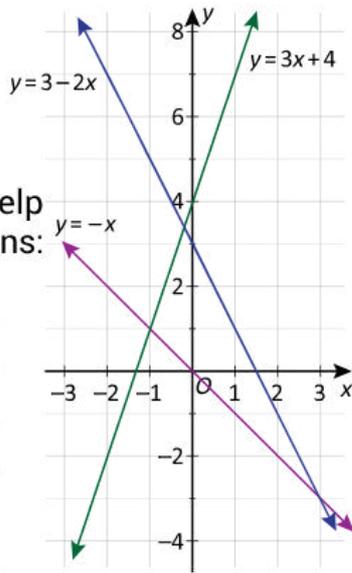
$\boxed{}$

Q28

3 lines are shown:

$y = 3x + 4$

$y = -x$

$y = 3 - 2x$

Use the graph to help solve these equations:

$3x + 4 = -x$

Solution is $x =$ ☐

$3 - 2x = -x$

Solution is $x =$ ☐

$3x + 4 = 1$

Solution is $x =$ ☐

$3 - 2x = 6$

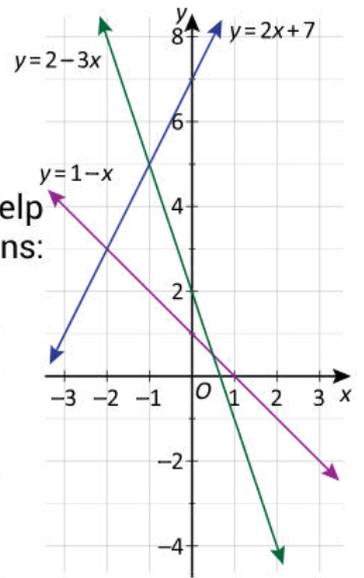Solution is $x =$ ☐

y = 3 − 2x

y = 3x + 4

y = −x

Q29

3 lines are shown:

$y = 2x + 7$

$y = 1 - x$

$y = 2 - 3x$

Use the graph to help solve these equations:

$2x + 7 = 2 - 3x$

Solution is $x =$ ☐

$1 - x = 2x + 7$

Solution is $x =$ ☐

$2 - 3x = 2$

Solution is $x =$ ☐

$2x + 7 = 2$

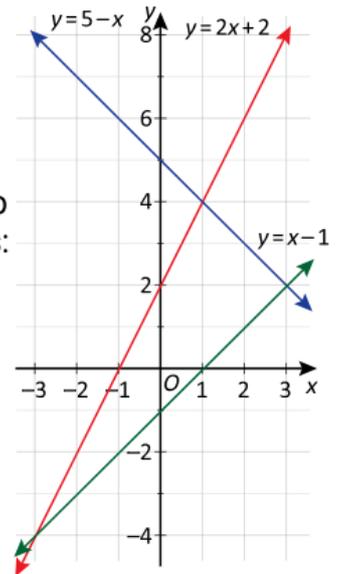Solution is $x =$ ☐

y = 2 − 3x

y = 2x + 7

y = 1 − x

Q30

3 lines are shown:

$y = 2x + 2$

$y = 5 - x$

$y = x - 1$

Use the graph to help solve these equations:

$2x + 2 = 5 - x$

Solution is $x =$ ☐

$2x + 2 = x - 1$

Solution is $x =$ ☐

$5 - x = x - 1$

Solution is $x =$ ☐

$x - 1 = 5$

Solution is $x =$ ☐

y = 5 − x

y = 2x + 2

y = x − 1