EXAM PAPERS PRACTICE

Linear Equations

Question Paper

Question 1

Solve the inequality $\frac{x}{3} + 5 > 2$. [2]

Question 2

Pavan saves $\$x$ each month.
His two brothers **each** save \$4 more than Pavan each month.

Altogether the three boys save \$26 each month.

(a) Write down an equation in x. [1]

(b) Solve your equation to find the amount Pavan saves each month. [2]

Question 3

During her holiday, Hannah rents a bike.
She pays a fixed cost of $8 and then a cost of $4.50 per day.
Hannah pays with a $50 note and receives $10.50 change.

Calculate for how many days Hannah rents the bike. [3]

Question 4

Solve the equations

(a) $0.2x - 3 = 0.5x$, [2]

(b) $2x^2 - 11x + 12 = 0$. [3]

Question 5

Angharad had an operation costing $500.
She was in hospital for x days.
The cost of nursing care was $170 for each day she was in hospital.

(a) Write down, in terms of x, an expression for the total cost of her operation and nursing care. [1]

(b) The total cost of her operation and nursing care was $2370.
Work out how many days Angharad was in hospital. [2]

Question 6

Showing all your working, solve

(a) $\frac{5x}{2} - 9 = 0,$ [2]

(b) $x^2 + 12x + 3 = 0$, giving your answers correct to 1 decimal place. [4]

Question 7

Solve

(a) $0.2x + 3.6 = 1.2$, [2]

(b) $\frac{2 - 3x}{5} < x + 2$. [3]

Question 8

Solve the equation $\frac{x}{4} - 8 = -2$. [2]

Question 9

Solve the equation.

$$\frac{n-8}{2} = 11$$

[2]

Question 10

Solve the equation.

$$5 - 2x = 3x - 19$$

[2]

Question 11

Solve the equation $1 + 2x = -15$.

[2]

Question 12

Solve the equation.

$5(2y - 17) = 60$ [3]

Question 13

Solve the equation $4x - 12 = 2(11 - 3x)$. [3]

Question 14

The cost of a cup of tea is t cents.

The cost of a cup of coffee is $(t + 5)$ cents.

The total cost of 7 cups of tea and 11 cups of coffee is 2215 cents.

Find the cost of one cup of tea. [3]

Question 15

Solve the equation $3(y - 4) + \frac{y}{2} = 9$. [3]

Question 16

Solve the equation

$$\frac{x-2}{4}=\frac{2x+5}{3}.$$ [3]

Question 17

Solve the equation

$$\frac{3x-2}{5}=8.$$ [2]

Question 18

Solve the equations.

(a) $7 - 3n = 11n + 2$ [2]

(b) $\frac{p - 3}{5} = 3$ [2]

Question 19

Solve.

$2 - x = 5x + 1$ [2]

Question 20

Solve the equation.

$$6(k - 8) = 78$$

[2]

Question 21

Make a the subject of the formula $s = ut + \frac{1}{2}at^2$.

[3]

Question 22

Solve.

$$5(w + 4 \times 10^3) = 6 \times 10^4$$

[2]

Question 23

Solve the equation.

$3(x + 4) = 2(4x - 1)$ [3]

Question 24

Solve the equation.

$\frac{x + 5}{x} = \frac{7}{3}$ [3]

Question 25

Solve the equation.

$$\frac{2x + 5}{3} = 8$$ [3]