

29 MORE PRACTICE AT WRITING AND SOLVING EQUATIONS

- 1 a A yard is 15 m long. A fence 50 m long is needed to go right around the perimeter of the yard.
If w is the width of the yard, which of these is correct?



- A $30 + 2w = 50$
B $15 + w = 50$
C $50 + 2w = 30$
D $w = 50 - 30$

- b Solve the correct equation to find the width of the yard.

- 2 a A square tile has length x .
The perimeter of the tile is 40 cm. Which of these is true?
A $x^2 = 40$ B $2x = 40$
C $4 + x = 40$ D $4x = 40$

- b Solve the correct equation to find the length of the tile.

- 3 a Each table at the café seats 4 people.
All of the tables except one have 4 people seated at them.
The remaining table has 2 people.
The total number of people at the café is 66.
If n is the number of tables, which of these is true?

- A $4 + n + 2 = 66$ B $4n + 12 = 66$
C $4n - 2 = 66$ D $4(n - 1) + 2 = 66$

- b Solve the correct equation for these to find n .

- 4 Solve these equations.

- a $\frac{3x}{4} = 9$ b $\frac{3b}{4} = 6$
c $5p - 7 = 28$ d $9d - 7 = 65$
e $8f - 7 = 23$ f $5q + 7 = 19$
g $4w - 9 = 25$ h $8(z - 3) = 48$
i $3(2y + 4) = 60$ j $5a - 3 = 4a + 7$
k $3n + 2 = 4n - 4$

- 5 $3x - 4 = 11$ and $2(x - 3) = 4$ both have the solution $x = 5$.
Write three more equations with a solution $x = 5$.

- 6 Solve each of these equations.

- a $2x + 5 - 5 = 0$
b $\frac{3x + 2}{2} - 3 = 10$
c $\frac{x - 2}{2} - 7 = 2$
d $5(x - 3) = 3(x - 4) + 13$
e $20 - 8(x - 3) = 4$



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7 Write and solve an equation for these.

- a A man is five times as old as his daughter.
The sum of their ages is 42.
How old is the daughter?



- b Nadia buys a coat for \$260.
She pays a deposit of \$50.
She pays for the rest in weekly installments of \$30.
How many weeks does it take for her to pay it off?

- c In Kent's class there are three times as many pupils who are right-handed then left-handed.
There are 28 pupils altogether.
How many are left-handed?

- d For every 100 pamphlets Wasim delivers he gets \$4.50.
Altogether last month he earned \$72.
How many pamphlets did he deliver?

- e There are 9 more girls than boys in a design and technology class.
There are 27 pupils in the class altogether.
How many boys are in the class?

- f Mansoor bought 5 tickets in a raffle.
The numbers were consecutive and added to 285.
What was the number on the first ticket?



- g Eight packets of sugar have the same mass as two packets of sugar plus 9 kg.
What is the mass of one packet?



- h Three times a number plus 6 is equal to twice the number plus 15.
What is the number?

- i Meggie buys four ice creams and a drink and this costs the same as two ice creams and 4 drinks.
If a drink costs 80 cents, how much does an ice cream cost?

- j The cost of a child's ticket is half the cost of an adult ticket.
Mr Jamieson buys tickets for 5 adults and 8 children.
The total cost is \$81.
What is the cost of an adult ticket?

- k Laura got a mean of 81% in her first three tests.
After her fourth test she had a mean of 80%.
What did she get in the fourth test?

- l The length of a rectangular garden is 2 m more than the width.
The perimeter of the garden is 18 m.
Find the width of the garden.