Numeracy and Mathematics

Number, Money and Measure

Expressions and **Equations**

Experiences and Outcomes

I can apply my knowledge of number of facts to solve problems where an unknown value is represented by a symbol or letter. **MTH 2-15a**

Benchmarks

Solves simple algebraic equations with one variable, for example, a - 30 = 40 and 4b = 20



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1. Solve these equations to find the value of x. Use the space below each equation to show your working clearly:

8 marks

a)
$$x - 5 = 15$$

b)
$$x + 3 = 27$$

c)
$$4x = 32$$

d)
$$\frac{1}{2}$$
 x = 25

$$e) 7x + 2 = 65$$

f)
$$\frac{1}{4}$$
 x - 20 = 20

g)
$$9x - 21 = 60$$

h)
$$x \times 3 = 24$$

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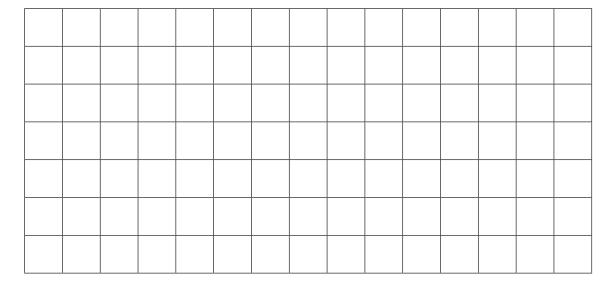
2. The number of apples in a crate is y. When 35 were sold, there were 65 left.



a) Which equation is the correct one?

i)
$$y + 35 = 65$$

b) Now solve the equation to find out how many apples were in the crate.





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3. At the sweet shop, the number of sheets in a bag is **a**. Jenny buys three bags of sweets. She has 60 sweets in total.

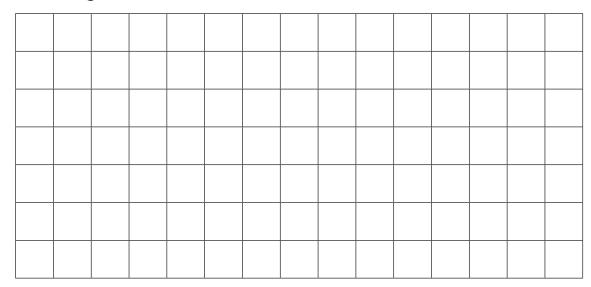


a) Which equation is the correct one to help you work out how many sweets are in each bag?

i)
$$5a = 60$$

i)
$$5\alpha = 60$$
 ii) $3\alpha = 60$ iii) $\alpha = 60$

b) Now solve the equation to find out how many sweets were in each bag.





** END OF TEST **

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Answers

1	a) x = 20	8 marks
	b) x = 24	
	c) x = 8	
	d) x = 50	
	e) x = 9	
	f) x = 160	
	g) x = 9	
	h) x = 8	
2	The number of apples in a crate is y. When 35 were sold, there were 65 left.	2 marks
	a) Which equation is the correct one?	
	iii) y - 35 = 65	
	b) Now solve the equation to find out how many apples were in the crate.	
	iii) y - 35 = 65 y = 65 + 35 y = 100 There were 100 apples in the crate.	
3	At the sweet shop, the number of sheets in a bag is a . Jenny buys three bags of sweets. She has 60 sweets in total.	2 marks
	a) Which equation is the correct one to help you work out how many sweets are in each bag?	
	ii) 3a = 60	
	b) Now solve the equation to find out how many sweets were in each bag.	
	ii) 3a = 60	
	a = 60 ÷ 3	
	a = 20	
	There were 20 sweets in each bag.	