



Thursday 11th June

Year 5/6: Enumerate Possibilities

Introduction

Stefan thinks he has listed possible answers that would fit this equation. Is he correct?

$$3d - 2 = e$$

Value of d	Value of e
2	4
3	6
4.25	10.75
6.75	7.75

Introduction

Stefan thinks he has listed possible answers that would fit this equation. Is he correct?

$$3d - 2 = e$$

Value of d	Value of e
2	4
3	6
4.25	10.75
6.75	7.75

No, Stefan is not correct.

If $d = 3$, then $e = 7$

If $d = 6.75$, then $e = 18.25$

Varied Fluency 1

True or false? Sinead has worked this out correctly.

$$a = 15$$

$$a + b = 25$$

$$c + b = 35$$

$$b = 10 \quad c = 11$$

Varied Fluency 1

True or false? Sinead has worked this out correctly.

$$a = 15$$

$$a + b = 25$$

$$c + b = 35$$

$$b = 10 \quad c = 11$$

False. $c = 25$

Varied Fluency 2

Use the table to find all the possible combinations for these two variables.

$$x - y = 10.5$$

0.5	3	15	4.5
9.5	20	13.5	11

Varied Fluency 2

Use the table to find all the possible combinations for these two variables.

$$x - y = 10.5$$

0.5	3	15	4.5
9.5	20	13.5	11

$$13.5 - 3; 20 - 9.5; 15 - 4.5; 11 - 0.5$$

Varied Fluency 3

List three possible values for a and b , where $c = 20$.

$$5a + b = c$$

Varied Fluency 3

List three possible values for a and b , where $c = 20$.

$$5a + b = c$$

Various possible answers, for example: $a = 3, b = 5$; $a = 2, b = 10$;
 $a = 1, b = 15$

Varied Fluency 4

Logan wants to buy some sweets. Some are 12p, some are 10p. He can spend £1.40 exactly. What combinations of sweets could he buy?



Varied Fluency 4

Logan wants to buy some sweets. Some are 12p, some are 10p. He can spend £1.40 exactly. What combinations of sweets could he buy?



**Various possible answers, for example: $12 \times 10 + 10 \times 2 = £1.40$;
 $12 \times 5 + 10 \times 8 = £1.40$; $12 \times 0 + 10 \times 14 = £1.40$**

Reasoning 1

Razia is trying to find all the possibilities for g and f .

$$3g + 11f = 60$$



If $g = 9$, f must = 33

Is Razia correct? Explain your answer.

Reasoning 1

Razia is trying to find all the possibilities for g and f .

$$3g + 11f = 60$$



If $g = 9$, f must = 33

Is Razia correct? Explain your answer.
Razia is incorrect because...

Reasoning 1

Razia is trying to find all the possibilities for g and f .

$$3g + 11f = 60$$



If $g = 9$, f must = 33

Is Razia correct? Explain your answer.

Razia is incorrect because she has forgotten that f needs multiplying by 11.

$$3 \times 9 = 27; 60 - 27 = 33; 33 \div 11 = 3; f = 3$$

Reasoning 2

If a is an odd number and b is 1.5, which of these could be true?

A. $2a + 3b = 7.5$

B. $a + a - 4b = 4$

C. $4a + 5b = 27.5$

D. $2a + 3b = 18.5$

Convince me.

Reasoning 2

If a is an odd number and b is 1.5, which of these could be true?

A. $2a + 3b = 7.5$

B. $a + a - 4b = 4$

C. $4a + 5b = 27.5$

D. $2a + 3b = 18.5$

Convince me.

They could all be true because...

Reasoning 2

If a is an odd number and b is 1.5, which of these could be true?

A. $2a + 3b = 7.5$

B. $a + a - 4b = 4$

C. $4a + 5b = 27.5$

D. $2a + 3b = 18.5$

Convince me.

They could all be true because: if $a = 1.5$, then A would be true; if $a = 5$, then B and C would be true; if $a = 7$, then D would be true.

Problem Solving 1

Sweety Treaty sell 2 medium sweet boxes and 4 small sweet boxes for £36. What possible prices can you find for each sweet box?

$$2m + 4s = £36$$

m	s

Problem Solving 1

Sweety Treaty sell 2 medium sweet boxes and 4 small sweet boxes for £36. What possible prices can you find for each sweet box?

$$2m + 4s = \text{£}36$$

m	s

Various possible answers, for example: $m = 8, s = 5$; $m = 9, s = 4.5$;
 $m = 10, s = 4$

Year 5 and Year 6 Developing

2a. Use the table to find all the possible combinations for these two variables.

$$a - b = 5$$

12	5	3	7
15	20	10	8



6 VF

2b. Use the table to find all the possible combinations for these two variables.

$$d + g = 18$$

10	1	12	6
17	8	14	4



6 VF

3a. List three possible values for a and b , where $c = 18$

$$2a + b = c$$



6 VF

3b. List three possible values for c and d , where $e = 12$.

$$c - 2d = e$$



6 VF

4a. Esther wants to buy some sweets. Some are 20p, some are 10p. She can spend 80p exactly. What combinations of sweets could she buy?



4b. Hadi wants to buy some pencils. Some are 10p, some are 20p. He can spend £1 exactly. What combinations of pencils could he buy?



2a. If a is an odd number and b is 2, which of these could be true?

A. $2a + 2b = 14$

B. $a \times b = 9$

C. $2a \times b = 12$

D. $a + 2b = 9$

Convince me.



6 R

2b. If a is 5 and b is an even number, which of these could be true?

A. $a + 2b = 12$

B. $2a + b = 16$

C. $2a \times b = 20$

D. $a + b = 8$

Convince me.



6 R

3a. Pizza 2 Go sells 2 medium pizzas and one small pizza for £22. What possible prices can you find for each pizza?

$$2m + s = \text{£}22$$

m	s



6 R

3b. Hippy Hats sell 2 knitted hats and 2 baseball caps for £80. What possible prices can you find for each hat?

$$2k + 2b = \text{£}80$$

k	b



6 R

Year 6 Expected

6a. Use the table to find all the possible combinations for these two variables.

$$x - y = 11.5$$

13.5	15.5	7.5	2
19	5.5	17	4



6 VF

6b. Use the table to find all the possible combinations for these two variables.

$$x + y = 18.5$$

13.5	14.5	17.5	1
17	5	1.5	4



6 VF

7a. List three possible values for a and b , where $c = 19.5$

$$3a + b = c$$



6 VF

7b. List three possible values for c and d , where $e = 20$

$$4c - d = e$$



6 VF

8a. Deanna wants to buy some cards. Some are 15p, some are 20p. She can spend £1.50 exactly. What combinations of trading cards could she buy?



8b. Arlo wants to buy some stamps. Some are 12p, some are 10p. He can spend £1.30 exactly. What combinations of stamps could he buy?



5a. If a is an odd number and b is 0.5, which of these could be true?

- A. $2a + 3b = 7.5$
- B. $a + a - 4b = 3$
- C. $4a + 5b = 22.5$
- D. $3a + 3b = 17.5$

Convince me.



6 R

5b. If a is a decimal number and b is 4, which of these could be true?

- A. $5a + b = 15$
- B. $3a + 3b = 13.5$
- C. $2a + 5b = 21$
- D. $2a \times b = 12$

Convince me.



6 R

6a. Coats 'r' Us sell 2 medium coats and 4 small coats for £100. What possible prices can you find for each coat?

$$2m + 4s = \text{£}100$$

m	s



6 PC

6b. Yum Wings sell 4 small chicken dippers and 2 large chicken buckets for £80. What possible prices can you find for each meal?

$$4s + 2l = \text{£}80$$

m	l



6 PC

Year 6 Greater Depth

10a. Use the table to find all the possible combinations for these two variables.

$$x - y = -5.5$$

10	1	12	0.5
-4.5	6	6.5	4.5



6 VF

10b. Use the table to find all the possible combinations for these two variables.

$$2x + y = 22.5$$

11	0.5	9	6.5
2.5	10	4.5	8



6 VF

11a. List three possible values for c and d , where $e = 25$

$$3c + 2d = e$$



6 VF

11b. List three possible values for c and d , where $e = 3$

$$2c - 2d = e$$



6 VF

12a. Heidi wants to buy some charms. Some are £1.20, some are £2.00. She can spend £12.00 exactly. What combinations of charms could she buy?



12b. Flynn wants to buy some stickers. Some are £1.20, some are £1.00. He can spend £15.00 exactly. What combinations of stickers could he buy?



8a. If a is a negative number and b is 7, which of these could be true?

- A. $a + b = 0$
- B. $a + 3b = 16$
- C. $a + 8b = 46$
- D. $a + 2b - b = 3$

Convince me.



6 R

8b. If a is -5 and b is a decimal number, which of these could be true?

- A. $a + b = -2.5$
- B. $a + 3b = -3.5$
- C. $a + 2b - b = 5.5$
- D. $a - b = -9.5$

Convince me.



6 R

9a. CinePlaza sell 2 medium popcorn and 2 small popcorn for £17.50. What possible prices can you find for each popcorn?

$$2m + 2s = \text{£}17.50$$

m	s



9b. Warm Wear sell 5 mittens and 5 hats for £22.50. What possible prices can you find for each item?

$$5m + 5h = \text{£}22.50$$

m	h

