

## Thursday (answers) – LO: to solve two-step equations.

### Varied fluency

#### Developing

1a. True; True; False,  $z + 1 = 5$ .

2a. 20

3a.  $2a - 5 = 7$  and  $a = 6$ ;  $a + 4 = 12$  and  $a = 8$ ;  $8 = 3 + a$  and  $a = 5$

4a. + 6

#### Expected

5a. True; False,  $2y + y = 12$ ; True

6a. 12

7a.  $9a \div 3 = 12$  and  $a = 4$ ;  $\frac{1}{4}a + 11 = 14$  and  $a = 12$ ;  $9 = 5 + 8a$  and  $a = 0.5$

8a.  $A = + 7$ ,  $B = \div 5$

#### Greater Depth

9a. True; False,  $3y \div y = 3$ ; False,  $7 - z = -2$

10a. 60

11a.  $18a + 24 = 30$  and  $a = \frac{1}{3}$ ;

$9a + 17 = 21.5$  and  $a = 0.5$ ;  $-5 = 6a - 29$  and  $a = 4$

12a.  $- 6.3$ ,  $\div 28$

### Reasoning and problem solving

#### Developing

1b. Various possible answers, for example:  $x + 1 = 4$ ,  $6 = 2x$ ,  $4 - x = 1$ .

2b. Various possible answers, for example: if  $c = 5$  then  $c + 1 = 6$ ,  $c + 2 = 7$ ,  $c + 3 = 8$ .

3b. Ben is correct because  $22 - 4 = 18$ . Freya is incorrect because  $22 - 5 = 17$ .

#### Expected

4b. Various possible answers, for example:  $5x - 10 = 4x$ ,  $6x \div 10 = 6$ ,  $10 \times 5 = 5x$ .

5b. Various possible answers, for example: if  $c = 6$  then  $3c - 6 = 12$ ,  $4c - 12 = 12$ ,  $5c - 18 = 12$ .

6b. Danny is correct because  $4 \times 3 = 12$  and  $60 \div 12 = 5$ . 4 is multiplied by  $x$  before being divided by 60.

#### Greater Depth

7b. Various possible answers, for example:  $16x - 6 = -2$ ,  $12x + 6 = 9$ ,  $6 \div 12x = 2$ .

8b. Various possible answers, for example: if  $c = 8$ , then  $5c \div 10 = 4$  and  $2c - 17 = -1$ ,  $4c \div 8 = 4$  and  $3c - 25 = -1$ ,  $3c \div 6 = 4$  and  $4c - 33 = -1$ .

9b. Oscar is correct because  $24 \times 0.75 = 18$  and  $18 - 20.4 = -2.4$ . Kelly is incorrect because the starting number can be made smaller when multiplying by a number less than 1.