

A.CED.A.1: Modeling Rationals**Answer Section**

1 ANS: 3 REF: 061722aaii

2 ANS: 3 REF: 061824aaii

3 ANS: 3 REF: 061602aaii

4 ANS: 2 REF: 082222aaii

5 ANS: 4 REF: 061124a2

6 ANS: 4

$$\frac{4 \cdot 0 + 6 \cdot 1 + 10 \cdot 2 + 0 \cdot 3 + 4k + 2 \cdot 5}{4 + 6 + 10 + 0 + k + 2} = 2$$

$$\frac{4k + 36}{k + 22} = 2$$

$$4k + 36 = 2k + 44$$

$$2k = 8$$

$$k = 4$$

REF: 061221a2

7 ANS: 2 REF: 018428siii

8 ANS: 1

$$x - \frac{20}{x} = 8$$

$$x^2 - 8x - 20 = 0$$

$$(x - 10)(x + 2) = 0$$

$$x = 10, -2$$

REF: 061916aaii

9 ANS: 3

$$\frac{5}{x} = 3 + \frac{7}{2x}$$

$$\frac{10}{2x} = 3 + \frac{7}{2x}$$

$$\frac{3}{2x} = 3$$

$$6x = 3$$

$$x = \frac{3}{6} = \frac{1}{2}$$

REF: 010927a

10 ANS:

$$\frac{3}{4}$$

REF: 060506al

11 ANS:

$$7$$

REF: 030503al

12 ANS:

$$\frac{55}{t} = \frac{65}{t+3}$$

$$65t = 55t + 165$$

$$10t = 165$$

$$t = 16.5$$

$$t+3 = 19.5$$

REF: 082431aii

13 ANS:

$$20$$

REF: 019015al

14 ANS:

$$9$$

REF: 039016al