6.4 Answers

6.4.1 Solutions to the Introductory Example

$f(x) = 5x + 4$ $\qquad$ $f^{-1}(x) = \dfrac{x - 4}{5}$

(i) 44 $\qquad$ **(ii)** 5
(iii) 59 $\qquad$ **(iv)** 8

8 in gives 44 out so in the inverse 44 in gets back to the 8.

[7 marks]

6.4.2 Solutions to 6.2 Exercise

Answer 1

(a) **(i)** $6x + 5$ $\qquad$ **(ii)** $\dfrac{x - 5}{6}$

(b) **(i)** 29 $\qquad$ **(ii)** 6
(iii) 59 $\qquad$ **(iv)** 11

[6 marks]

Answer 2

(a) **(i)** $6(x + 5) = 6x + 30$ $\qquad$ **(ii)** $\dfrac{x}{6} - 5$

(b) **(i)** 54 $\qquad$ **(ii)** 3
(iii) 120 $\qquad$ **(iv)** 7

[6 marks]

Answer 3

(a) (i) $7(x - 8) = 7x - 56$ $\qquad$ **(ii)** $\dfrac{x}{7} + 8$

(b) **(i)** 35 $\qquad$ **(ii)** 19
(iii) 140 $\qquad$ **(iv)** 78

[6 marks]

Answer 4

(a) **(i)** $8x - 5$ $\qquad$ **(ii)** $\dfrac{x + 5}{8}$

(b) **(i)** 43 $\qquad$ **(ii)** 3
(iii) 7 $\qquad$ **(iv)** 11

[6 marks]

Answer 5

(a) **(i)** $\dfrac{x}{3} + 11$ $\qquad$ (ii) $3(x - 11) = 3x - 33$

(b) **(i)** 33 $\qquad$ **(ii)** 12
(iii) 18 $\qquad$ **(iv)** 24

[6 marks]

Answer 6

(a) **(i)** $\dfrac{x - 7}{5}$ **(ii)** $5x + 7$

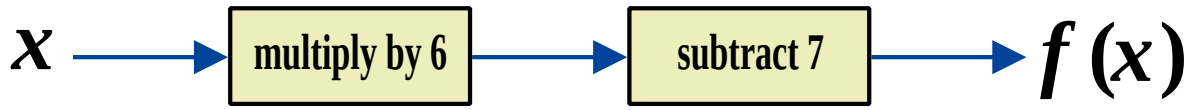
(b) **(i)** 3 **(ii)** 12

(iii) 6 **(iv)** 47

[6 marks]

Answer 7

(a)



(b) $\dfrac{x + 7}{6}$

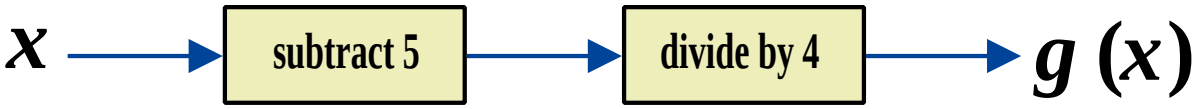
(c) **(i)** 53 **(ii)** 3

(iii) 47 **(iv)** 6

[6 marks]

Answer 8

(a)



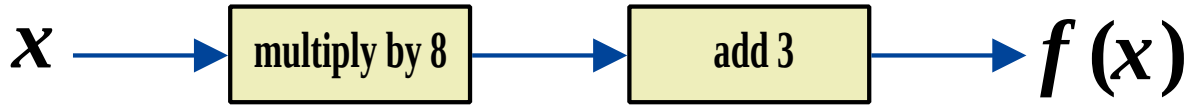
(b) $4x + 5$

(c) **(i)** 2 **(ii)** 49

(iii) 8 **(iv)** 33

[6 marks]

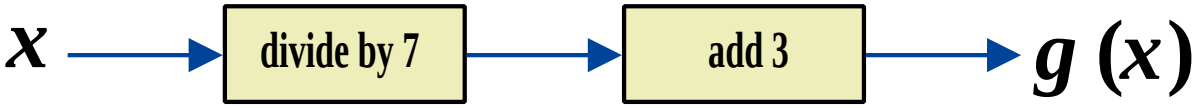
Answer 9



$\dfrac{x - 3}{8}$

[3 marks]

Answer 10



$7 (x - 3)$ or $7x - 21$

[3 marks]