10. Complete the missing values

$y = 4x + 5$

x	6	-3	2	-7
y	29	-7	13	-23

11 a) $y = 11x + 3$ is a linear function

b) $y = 2x^2 + 8$ is a non-linear function.

c) $y = -4$ is a linear function.

d) $y = 5x^3 - 7x^2$ is a non-linear function.

12. When there are 7 lions in a cage 13 people are likely to be injured.

13.

Perimeter $= 2n + 3 + 4 + n + 3 + n + 2n + 4$

$6n + 14$

$14 + 6n$

Area $= (2n \times 4) + 3(4 + n)$

$8n + 12 + 3n$

$11n + 12$

$12 + 11n$

14. $\frac{7d}{g^2}$

15. Solve for x

$6x - 9 = 51$

$6x = 51 + 9$

$\frac{6x}{6} = \frac{60}{6}$ 10

$x = 10$

16. Solve for x: ~~26x~~

$26 - x = 10x + 4$

(b.) $x = 2$

17. (c.) $x = -7$ or $x = 4$

18. a) $4(h - 11)$

$4h - 44$

b) $(f-2)(f-9)$

$f(f-9) - 2(f-9)$

$f^2 - 9f - 2f + 18$

$f^2 - 11f + 18$

c) $(5a+3)^2$

$5a(5a+3) + 3(5a+3)$

$25a^2 + 15a + 15a + 9$

$25a^2 + 30a + 9$

22. $x^2 - x - 30$

(c.) $x - 6$

23. $8x^2 - 3x - 5$

(b) $8x + 5$

24. $7x^3 - 70x^2 + 63x$

(a.) $x(7x^2 - 70x + 63)$

25 $\sqrt{41}$

c. 4 and 1

26. a) $\sqrt{\frac{121}{81}} = \frac{11}{9}$

b) $\sqrt{10}\sqrt{10} + \sqrt{3}$

$10 + \sqrt{3}$

c) $\sqrt{300} + \sqrt{12}$

$\sqrt{100}\sqrt{3} + \sqrt{4}\sqrt{3}$

$10\sqrt{3} + 2\sqrt{3}$

$12\sqrt{3}$

27.

(b) $8x + 6$

28

$\frac{30x - 18}{12x - 6} = \frac{6(5x - 3)}{6(2x - 1)}$

$\frac{5x - 3}{2x - 1}$

29. $(2, 6)\ (3, 1)$

$\frac{6 - 1}{2 - 3} = \frac{5}{-1}$

$\frac{y - 1}{x - 3} = \frac{-5}{1}$

$y - 1 = -5x + 15$

$y = -5x + 16$

30. $(1, 3)\ (6, 43)$

$\frac{43 - 3}{6 - 1} = \frac{40}{5} = 8$

$\frac{y - 3}{x - 1} = \frac{8}{1}$

$y - 3 = 8x - 8$

$y = 8x - 5$

31.

$$\frac{y-11}{x+3} = -\frac{1}{8}$$

$$8y - 88 = -x - 3$$

$$\frac{8y}{8} = \frac{-x}{8} + \frac{85}{8}$$

$$y = -\frac{1}{8}x + \frac{85}{8}$$