

## OCTOBER - HIGHER - ANSWERS

2nd: a)  $p = \pm \sqrt{\frac{r+9}{6}}$

b)  $\pm 8$

3rd: a)  $x = \sqrt[12]{\sqrt{4}}$

b)  $\frac{1}{25}$

4th a)  $\frac{8}{7}$  (0.142857)

b) i) 3.435 ii) 3.44

5th  $x < -\frac{1}{3}$  &  $x > \frac{1}{2}$

6th a) £213.70

b) £1560

7th/8th  $x = 2.47$  &  $-0.81$

9th a)  $(x-3)^2 + 1$  c) (3, 1)

10th 1.4%

11th (-4, 8) & (8, -4)

$AB = 12\sqrt{2}$

12th 857

13th  $198\text{cm}^2$

14th/15th  $157.5\text{cm}^2$

16th  $m = \frac{2r+1}{3+r}$

17th b) -2

18th a)  $\frac{81}{25}$  b) 16

c)  $\frac{243}{100000}$

19th a)  $x > -2$  b)  $-4 \leq x < 4$

c) -1, 0, 1, 2, 3

20th a)  $\frac{455}{77}$

b)  $2n^2 - 5n + 1$

21st/22nd £284.55

23rd a)  $8.94 \times 10^6$

b) 0.00912

c) 33 min

24th  $73.58^0$

25th a)  $f^{-1}(x) = \frac{x+3}{4}$

b) 153

c)  $\frac{1}{2}$  & 1

26th  $x = -2$   $y = 4$

27th a=3 b=10 c=3 d=9 e=-1

28th/29th b) 3.70

30th a)  $2x^2 - 5x - 12$

b)  $x = -5$  & 2

31st  $48x = 16(3x)$