

Solution station to Final Exam Review

- ① $\frac{1}{2}$
- ② $\frac{5 \pm i\sqrt{47}}{12}$
- ③ Horiz Asymp: $y=1$
- ④ $\sqrt[3]{a^4} \rightarrow a\sqrt[3]{a}$
- ⑤ $x=9.12$
- ⑥ B
- ⑦ 8
- ⑧ $36-i$
- ⑨ initial height from which the ball was thrown
- ⑩ $-\sqrt{3}$
- ⑪ hole at $(-3, -1)$
- ⑫ 42.1%
- ⑬ $\frac{9y^2}{x^3}$
- ⑭ $-1, 4, \pm 5i$
- ⑮ right 2, down 3, stretched by a factor of 4 domain: $x \geq 2$
- ⑯ $\log_2 xy^4$
- ⑰ -1
- ⑱ $\frac{t^2 - 2t + 1}{t + 3}$
- ⑲ $x=0.71$
- ⑳ 60
- ㉑ $\frac{2(2+x)}{x(x-3)}$
- ㉒ A
- ㉓ ∞
- ㉔ D
- ㉕ ≈ 5 hours
- ㉖ $-\sqrt{2}$
- ㉗ about 6 scores
- ㉘ VA: $x=0$
HA: $y=1$
- ㉙ $\frac{18+i}{25}$

(30) Discriminant = 136
2 real roots

(31) \$630.21

(32) $80 = -16x^2 + 60x + 255$
 $x = 5.7$ seconds

(33) $\frac{2\sqrt{3}}{3}$

(34) VA @ $x = 1$

(35) B

(36) $2i\sqrt{7}$

(37) $\log_{16} 4 = \frac{1}{2}$

(38) undefined

(39) $x = .72$

(40) C $(2x-1)$

(41) $8\sqrt[3]{x^2}$

(42) 3 ∓ -1

(43) $(1, \infty)$

(44) $y \geq -4$

(45) 137%

(46) $\frac{2}{(x+4)(x-3)}$

(47) C

(48) C 268

(49) $(5, -4)$

(50) .633

(51) $-y\sqrt[3]{9x^2y}$

(52) $y = 0$

(53) 81 or 82

(54) 6 seconds

(55) D. $\log_2 8 = 3$

(56) A

(57) $\frac{4 - 2\sqrt{3} - 2\sqrt{2} + \sqrt{5}}{4}$

(58) $\frac{4}{(m-5)(2m+1)}$

$$(59) \quad -\frac{3\pi}{2}$$

$$(60) \quad 16.625$$

$$(61) \quad 2.33$$

$$(62) \quad (-5, 0)$$

$$(63) \quad 36.4\%$$

$$(64) \quad x = 16$$

$$(65) \quad x = 12.5$$

$$(66) \quad \frac{3}{m-5}$$

$$(67) \quad D$$

$$(68) \quad B$$

$$(69) \quad (-1, -1)$$

$$(70) \quad (2x-3)(4x^2+6x+9)$$

(71) downward; maximum

$$(72) \quad (1, -5)$$

$$(73) \quad B - 150^\circ$$

$$(74) \quad \text{skip}$$

$$(75) \quad 5$$

$$(76) \quad \frac{\sqrt{3}}{2} \text{ in } Q1$$

$$\text{or} \\ -\frac{\sqrt{3}}{2} \text{ in } Q3$$

$$(77) \quad 4.425 \text{ yrs}$$

$$(78) \quad 4(y-2)(y^2+2y+4)$$

$$(79) \quad \frac{2}{5}$$

$$(80) \quad 11$$

$$(81) \quad 3 \log x + 2 \log y$$

$$(82) \quad A$$