DSE 2010 Answer Key
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1.(c) $\frac{1}{3}$
2.(d) the distribution has multiple medians
3.(b) $\frac{1}{12}$
4.(c) $\frac{7}{8}$
5.(a) the interval contains the parameter $\beta$ with probability 0.95
6.(a) $\succ$ is transitive
7.(c) constant marginal rate of substitution and diminishing marginal utilities
8.(d) lexicographically preferring $x_{1}$ to $x_{2}$
9.(d) both firms produce positive outputs with firm 2 producing more than firm 1
10.(a) it doubles
11.(c) always an automatic stabilizer in the long run
12.(d) all of the above
13.(b) government seigniorage goes down
14.(c) it affects the money demand function but does not affect the investment function
15.(d) an decrease in both the real and nominal demand for money
16.(b) $-\operatorname{det} A$
17.(c) has limit points 1 and -1 (Note: The sequence has no limit but it has two limit points.)
18.(d) all of the above are true
19.(c) $\frac{1}{2}$ and $\frac{1}{2}$
20.(d) 2
21.(c) $2 \int_{a}^{b} f(x) d x$
22.(c) $\frac{n}{n+1}$
23.(b) $X$ and $Y$ are uncorrelated but dependent
24.(a) $\frac{1}{2}$
25.(d) $\frac{28}{45}$
26.(c) $\frac{\sin ^{-1}(x)}{\pi}+\frac{1}{2}$
27.(d) $\sigma^{2}$
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28.(c) $\frac{1}{25}$
29.(b) $\frac{21}{37}$
30.(a) not independent
31.(d) 1 gets $(1,0)$ and 2 gets $(1,1)$
32.(a) $\frac{p_{x}}{p_{y}}=1$
33.(c) $\frac{p_{x}}{p_{y}} \leq 1$
34.(c) is empty
35.(a) the lottery $(0,0.11,0.89)$
36.(c) $A$ gets $\left(\frac{1}{2}, \frac{3}{2}\right)$ and $B$ gets $\left(3, \frac{1}{2}\right)$
37.(d) $x_{d}=x^{*}$ and $y_{d}=y^{*}$
38.(d) $p_{1}=3$ and $p_{2}$ is 2 or 3
39.(a) firm 1's optimal isoprofit curve and firm 2's reaction curve intersect at $\left(q_{1}, q_{2}\right)$ and are tangential at $\left(q_{1}, q_{2}\right)$
40.(b) a non-credible threat
41.(c) real wage is unchanged and real money supply is unchanged.
42.(b) budget will go into surplus
43.(a) $\beta>\frac{\gamma}{\delta}$
44.(c) for high values of $P$ it will be vertical; for some mid-range values of $P$ it will be downward sloping; for low values of $P$ it will be vertical again
45.(d) shifts to the right
46.(a) shifts up
47.(c) $\frac{1}{1-c_{B}+\lambda\left(c_{B}-c_{A}\right)}$
48.(b) equilibrium output unambiguously decreases
49.(a) equilibrium output unambiguously increases
50.(a) equilibrium output unambiguously increases
51.(b) at most one
52.(a) (i) is true and (ii) is false
53.(a) (i) is true and (ii) is false
54.(c) $g$ is increasing in $x$ but may or may not be increasing in $y$
55.(d) none
56.(c) $Z$
57.(a) $X$
58.(b) $f$ has a minimum but not a maximum over $(a, b)$
59.(a) $f(x) \leq 0$ for every $x \in[a, b]$
60.(a) $g$ is non-decreasing.

