

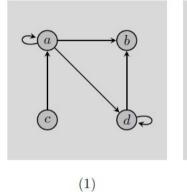
test eval

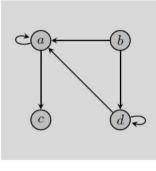
1 of 46

Refer to the following:

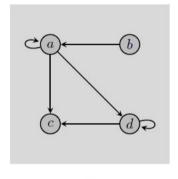
R	a	b	c	d
a	1	1	0	1
b	0	0	0	0
c	1	0	0	0
d	0	1	0	1

Which of the following diagrams represents the same situation as the above table?

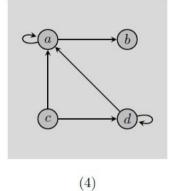




(2)



(3)



○(1) ○(2)

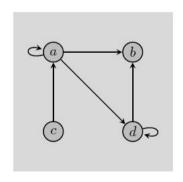
 $\bigcirc$ (3)

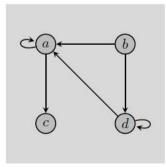
 $\bigcirc$ (4)

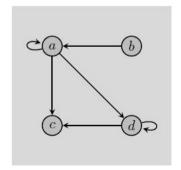
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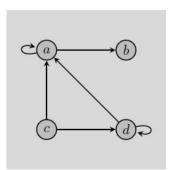
Refer to the following:

R	a	b	c	d
a	1	0	1	0
$a \\ b$	1	0 0 0 0	0	1
c	0	0	0	0
d	1	0	0	1









(1)

(2)

(3)

(4)

 $\bigcirc$ (1)

O(2)

 $\bigcirc$ (3)

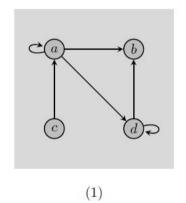
 $\bigcirc$ (4)

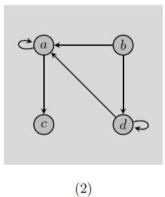
3 of 46

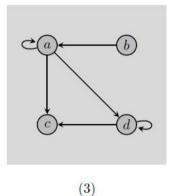
Refer to the following:

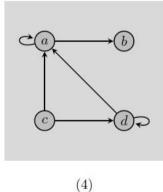
R	a	b	c	d
$a \\ b$	1	0	1	1
b	1	0	0	0
c	0	0	0	0
d	0	0	1	1

Which of the following diagrams represents the same situation as the above table?









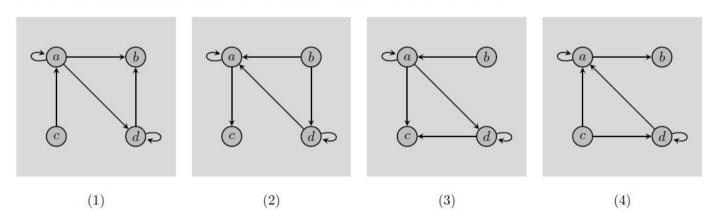
○(1) ○(2)

 $\bigcirc$ (3)

O(3)

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R	a	b	c	d
a	1	1	0	0
$\frac{a}{b}$	0	0	0	0
c	1	0	0	1
d	1	0	0	1



 $\bigcirc$ (1)

 $\bigcirc$ (2)

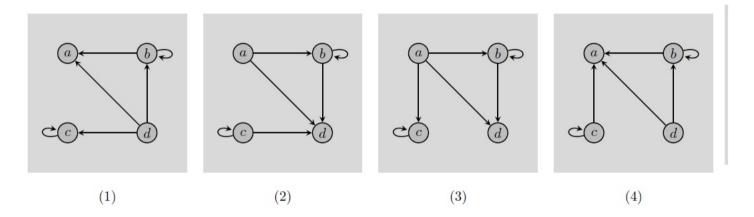
(3) (4)

5 of 46

Refer to the following:

R	a	b	c	d
$a \\ b$	0	0	0	0
b	1	1	0	0
c	0	0	1	0
d	1	1	1	0

Which of the following diagrams represents the same situation as the above table?



 $\bigcirc$ (1)

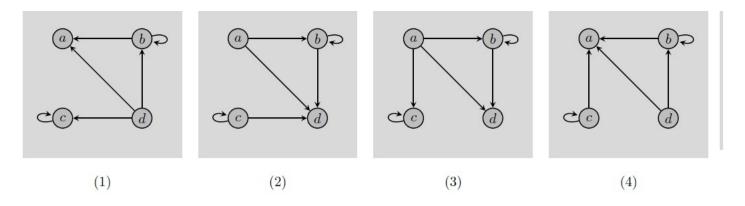
(2) (3)

 $\bigcirc$ (4)

6 of 46

Refer to the following:

R	a	b	c	d
$egin{matrix} a \\ b \\ c \\ d \end{array}$	0 0 0 0	1	0	1
b	0	1	0	1
c	0	0	1	1
d	0	0	0	0



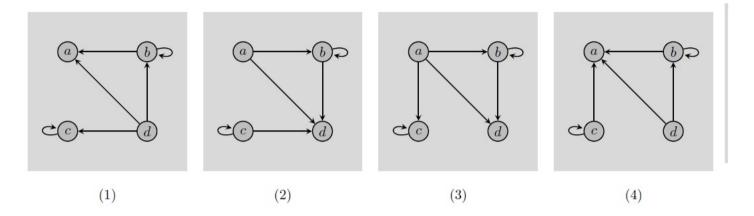
 $\bigcirc$ (1)

○(2) ○(3) ○(4)

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R	a	b	c	d
$\frac{a}{b}$	0	1	1	1
b	0	1	0	1
c	0	0	1	0
d	0	0	0	0

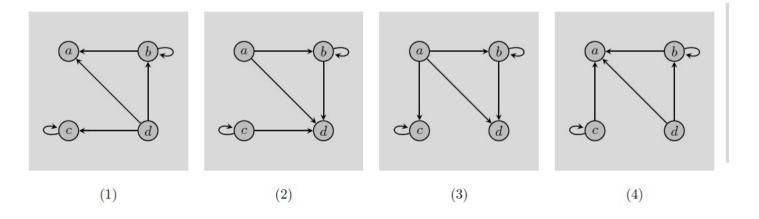
Which of the following diagrams represents the same situation as the above table?



(1) 8 (2) 8 (3)

Refer to the following:

,	0	b	a	R
)	(	0	0	a
	(	1	1	b
	1	0	1	c
)	(	1	1	d
)	(	0	0 1 1 1	$egin{array}{c} a \\ b \\ c \\ d \end{array}$



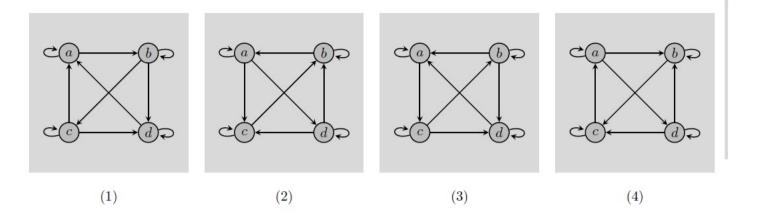
○(1) ○(2) ○(3) ○(4)

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Refer to the following:

R	a	b	c	d
a	1	1	0	0
$a \\ b$	0	1	1	1
c	1	0	1	1
d	1	0	0	1

which of the following diagrams represents the same situation as the above table:



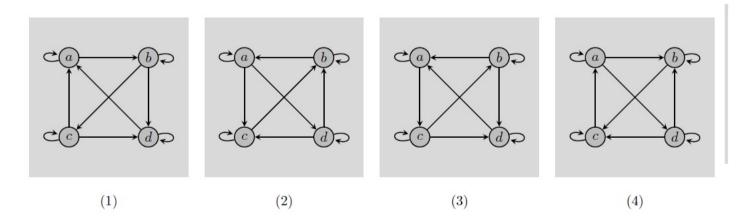
10 of 46

Refer to the following:

 $\bigcirc$ (2)

O(3) O(4)

R	a	b	c	d
a	1	0	1	1
b	1	1	0	0
c	0	1	1	0
d	0	1	1	1

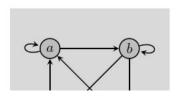


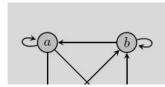
○(1) ○(2) ○(3) ○(4)

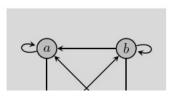
11 of 46

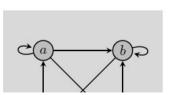
Refer to the following:

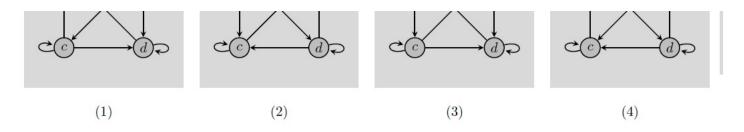
R	a	b	c	d
a	1	0	1	0
b	1	1	0	1
c	0	1	1	1
d	1	0	0	1









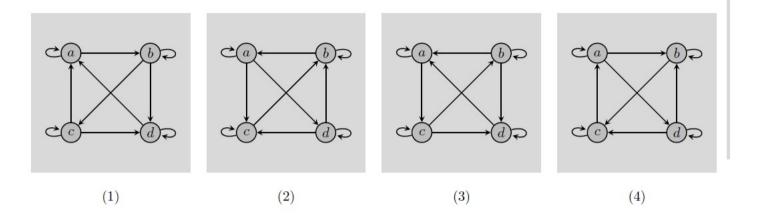


(1) (2) (3) (4)

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R	a	b	c	d
a	1	1	0	1
$\frac{a}{b}$	0	1	1	0
c	1	0	1	0
d	0	1	1	1

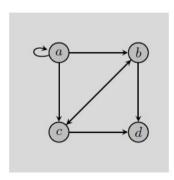
Which of the following diagrams represents the same situation as the above table?



O(1)

(2) 13(sf) 46

(4) Refer to the following:

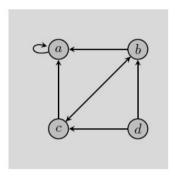


Which one of the following formulas (if any) is true in the situation represented by the above diagram?

- ⊝∃y∀xRxy
- ○∃x∀yRxy
- $\bigcirc$ ( $\forall$ x $\exists$ yRxy&~ $\exists$ y $\forall$ xRxy)
- $\bigcirc$ ( $\forall$ y $\exists$ xRxy& $\sim$  $\exists$ x $\forall$ yRxy)
- ONone of the above

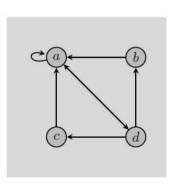
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refer to the following:



Which one of the following formulas (if any) is true in the situation represented by the above diagram?

 $\bigcirc \exists y \forall x Rxy$ O∃x∀yRxy O(∀x∃yRxy&~∃y∀xRxy) 5(♥y£xRxy&~∃x∀yRxy) None of the above Refer to the following:

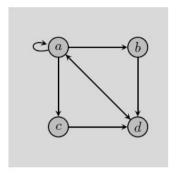


Which one of the following formulas (if any) is true in the situation represented by the above diagram?

- O∃y∀xRxy O∃x∀yRxy
- $\bigcirc$ ( $\forall$ x $\exists$ yRxy& $\sim$  $\exists$ y $\forall$ xRxy)
- ○(∀y∃xRxy&~∃x∀yRxy)
- ONone of the above

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Refer to the following:



Which one of the following formulas (if any) is true in the situation represented by the above diagram?

**⊝∃**y∀xRxy

O∃x∀yRxy

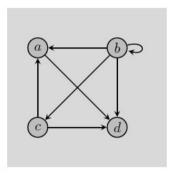
 $\bigcirc$ ( $\forall$ x $\exists$ yRxy&~ $\exists$ y $\forall$ xRxy)

 $\bigcirc(\forall y \exists x Rxy \& \neg \exists x \forall y Rxy)$ 

ONone of the above

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Refer to the following:



Which one of the following formulas (if any) is true in the situation represented by the above diagram?

⊝∃у∀хRху

⊙∃x∀yRxy

 $\bigcirc$ ( $\forall x \exists y Rxy \& \sim \exists y \forall x Rxy$ )

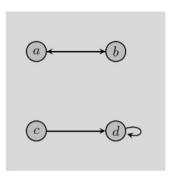
 $\bigcirc(\forall y \exists x Rxy \& \neg \exists x \forall y Rxy)$ 

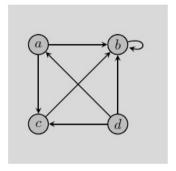
None of the above.

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Refer to the following:





Which one of the following formulas (if any) is true in the situation represented by the above diagram?

**⊝∃**y∀xRxy

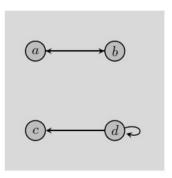
O∃x∀yRxy O(∀x∃yRxy&~∃y∀xRxy)

○(∀y∃xRxy&~∃x∀yRxy)

ONone of the above

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Refer to the following:



Which one of the following formulas (if any) is true in the situation represented by the above diagram?

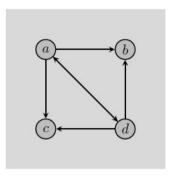
⊝∃y∀xRxy

 $\bigcirc \exists x \forall y Rxy$ 

- $\bigcirc (\forall x \exists y Rxy \& \sim \exists y \forall x Rxy) \\ \bigcirc (\forall y \exists x Rxy \& \sim \exists x \forall y Rxy)$
- None of the above

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Refer to the following:

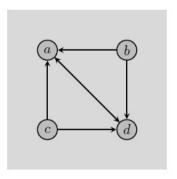


Which one of the following formulas (if any) is true in the situation represented by the above diagram?

- ⊙∃у∀хRху
- O∃x∀yRxy
- $\bigcirc$ ( $\forall$ x $\exists$ yRxy&~ $\exists$ y $\forall$ xRxy)
- $\bigcirc(\forall y \exists x Rxy \& \neg \exists x \forall y Rxy)$
- None of the above

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Refer to the following:



Which one of the following formulas (if any) is true in the situation represented by the above diagram?

- ⊝∃y∀xRxy
- O∃x∀yRxy
- $\bigcirc$ ( $\forall x \exists y Rxy \& \sim \exists y \forall x Rxy$ )
- $\bigcirc$ ( $\forall$ y $\exists$ xRxy&~ $\exists$ x $\forall$ yRxy)
- None of the above

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R	a	b	c	d
a	1	0	1	0
b	1	1	0	0
c	0	1	1	0
d	1	0	1	0

Which one of the following formulas (if any) is true in the situation represented by the above table?

○(∃y∀xRxy&~∃x∀yRxy) ○(∃x∀yRxy&~∃y∀xRxy) ○(∀x∃yRxy&~∃y∀xRxy)

 $\bigcirc(\forall y \exists x Rxy \& \neg \exists x \forall y Rxy)$ 

None of the above

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Refer to the following:

Which one of the following formulas (if any) is true in the situation represented by the above table?

(∃y∀xRxy&~∃x∀yRxy)

○(∃x∀yRxy&~∃y∀xRxy)

 $\bigcirc(\forall x\exists yRxy\&\sim\exists y\forall xRxy)$ 

 $\bigcirc(\forall y \exists x Rxy \& \neg \exists x \forall y Rxy)$ 

None of the above

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Refer to the following:

Which one of the following formulas (if any) is true in the situation represented by the above table?

 $\bigcirc$ ( $\exists y \forall x Rxy \& \neg \exists x \forall y Rxy$ )

 $\bigcirc$ ( $\exists x \forall y Rxy \& \sim \exists y \forall x Rxy$ )

 $\bigcirc(\forall x\exists yRxy\&\sim\exists y\forall xRxy)$ 

(∀y∃xRxy&~∃x∀yRxy)

ONone of the above

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R	a	b	c	d
a	0	0	0	0
$egin{array}{c} a \\ b \\ c \\ d \end{array}$	1	1	1	1
c	0	1	0	0
d	1	0	1	0

Which one of the following formulas (if any) is true in the situation represented by the above table?

```
(∃y∀xRxy&~∃x∀yRxy)
```

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Refer to the following:

Which one of the following formulas (if any) is true in the situation represented by the above table?

```
\bigcirc(\exists y \forall x Rxy \& \neg \exists x \forall y Rxy)
```

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Refer to the following:

Which one of the following formulas (if any) is true in the situation represented by the above table?

 $\bigcirc$ ( $\exists y \forall x Rxy \& \neg \exists x \forall y Rxy$ )

 $\bigcirc$ ( $\exists x \forall y Rxy \& \neg \exists y \forall x Rxy$ )

 $\bigcirc(\forall x\exists yRxy\&\sim\exists y\forall xRxy)$ 

 $\bigcirc(\forall y \exists x Rxy \& \neg \exists x \forall y Rxy)$ 

ONone of the above

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$$R \mid a \mid b \mid c \mid d$$

<sup>(∃</sup>x∀yRxy&~∃y∀xRxy)

 $<sup>\</sup>bigcirc(\forall x\exists yRxy\&{\sim}\exists y\forall xRxy)$ 

<sup>○(∀</sup>y∃xRxy&~∃x∀yRxy) ○None of the above

 $<sup>\</sup>bigcirc$ ( $\exists x \forall y Rxy \& \neg \exists y \forall x Rxy$ )

<sup>○(∀</sup>x∃yRxy&~∃y∀xRxy)

 $<sup>\</sup>bigcirc(\forall y \exists x Rxy \& \neg \exists x \forall y Rxy)$ 

ONone of the above

Which one of the following formulas (if any) is true in the situation represented by the above table?

 $\bigcirc$ ( $\exists y \forall x Rxy \& \neg \exists x \forall y Rxy$ )

 $\bigcirc$ ( $\exists x \forall y Rxy \& \neg \exists y \forall x Rxy$ )

○(∀x∃yRxy&~∃y∀xRxy)

(∀y∃xRxy&~∃x∀yRxy)

ONone of the above

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Refer to the following:

Which one of the following formulas (if any) is true in the situation represented by the above table?

 $\bigcirc$ ( $\exists y \forall x Rxy \& \neg \exists x \forall y Rxy$ )

(∃x∀yRxy&~∃y∀xRxy)

 $\bigcirc(\forall x\exists yRxy\&\sim\exists y\forall xRxy)$ 

○(∀y∃xRxy&~∃x∀yRxy) ○None of the above

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Refer to the following:

Which one of the following formulas (if any) is true in the situation represented by the above table?

 $\bigcirc$ ( $\exists y \forall x Rxy \& \neg \exists x \forall y Rxy$ )

 $\bigcirc(\exists x \forall y Rxy \& \neg \exists y \forall x Rxy)$ 

(∀x∃yRxy&~∃y∀xRxy)

 $\bigcirc$ ( $\forall$ y $\exists$ xRxy& $\sim$  $\exists$ x $\forall$ yRxy)

ONone of the above

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Refer to the following:

Which one of the following formulas (if any) is true in the situation represented by the above table?

```
\bigcirc(\exists y \forall x Rxy \& \neg \exists x \forall y Rxy)
```

- ○(∀x∃yRxy&~∃y∀xRxy)
- $\bigcirc(\forall y \exists x Rxy \& \neg \exists x \forall y Rxy)$
- None of the above

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Refer to the following:

Which one of the following formulas (if any) is true in the situation represented by the above table?

- $\bigcirc$ ( $\exists$ y $\forall$ xRxy& $\sim$  $\exists$ x $\forall$ yRxy)
- $\bigcirc$ ( $\exists x \forall y Rxy \& \sim \exists y \forall x Rxy$ )
- $\bigcirc(\forall x \exists y Rxy \& \neg \exists y \forall x Rxy)$
- ○(∀y∃xRxy&~∃x∀yRxy)
- None of the above

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Refer to the following:

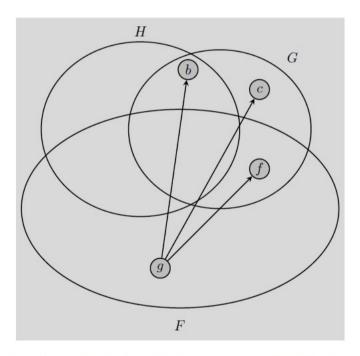
Which one of the following formulas (if any) is true in the situation represented by the above table?

 $<sup>\</sup>bigcirc$ ( $\exists x \forall y Rxy \& \sim \exists y \forall x Rxy$ )

- $\bigcirc (\exists y \forall x Rxy \& \neg \exists x \forall y Rxy) \\ \bigcirc (\exists x \forall y Rxy \& \neg \exists y \forall x Rxy)$
- $\bigcirc(\forall x \exists y Rxy \& \neg \exists y \forall x Rxy)$
- $\bigcirc$ ( $\forall$ y $\exists$ xRxy&~ $\exists$ x $\forall$ yRxy)
- ONone of the above

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Refer to the following:

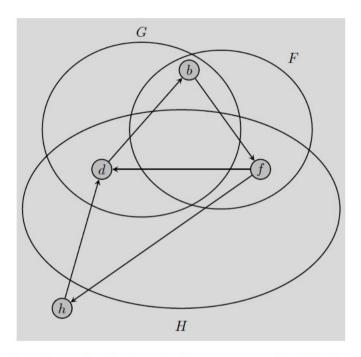


Which one of the following formulas is true in the situation represented by the above diagram?

- $\bigcirc \exists x \forall y Rxy$
- $\bigcirc \forall y \exists x (Gy \supset Rxy) \\
  \bigcirc \exists x (Hx \& Fx)$
- $\bigcirc$ ( $\forall x \exists y Rxy \& \forall x (Gx)$ )
- None of the above

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Refer to the following:

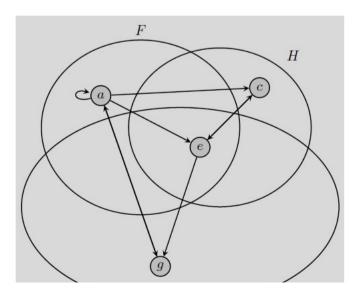


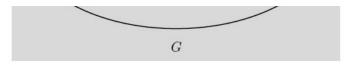
Which one of the following formulas is true in the situation represented by the above diagram?

○∀x∃y(~Gx⊃Rxy)
○∀x∀y(~Gx⊃Rxy)
○¬∃x∃y((Gx&Gy)&Rxy)
○∃x∀y(Rxy⊃(~Gx&~(Fx∨Hx)))

ONone of the above

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Which one of the following formulas is true in the situation represented by the above diagram?

 $\bigcirc$ ( $\exists x \forall y (Rxy) \& \exists y \forall x (Rxy \& Fx))$ 

O∃y∀x(Rxy&Fx)

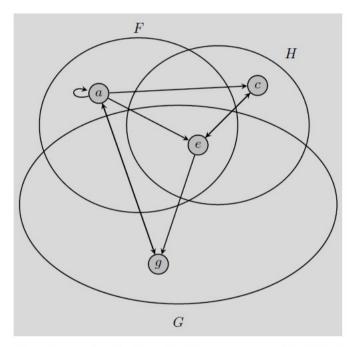
 $\bigcirc$ ( $\forall$ x $\exists$ yRxy&~( $\exists$ x $\exists$ y(Rxy&(~Fx&(~Gx&~Hx)))))

 $\bigcirc \forall x \exists y ((Fx\&(Gx\&Hx)) \supset (Gy\&Rxy))$ 

ONone of the above

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Refer to the following:



Which one of the following formulas is true in the situation represented by the above diagram?

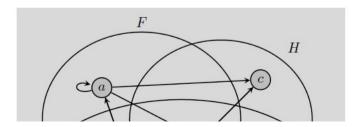
 $\bigcirc \exists x \forall y (Rxy\&Gx)$  $\bigcirc \exists x \forall y (Rxy\&Hx)$ 

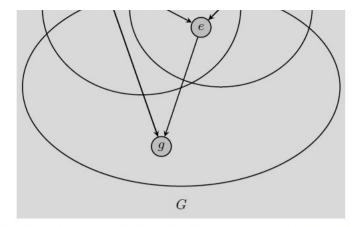
 $\bigcirc \exists x \forall y (Rxy\&(Hx\&\sim Gx))$ 

 $\bigcirc \exists x \forall y (Rxy\&\sim Fx)$ 

ONone of the above

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Which one of the following formulas is true in the situation represented by the above diagram?

 $\bigcirc \exists x \forall y (Rxy \& (Hx \lor Gx))$ 

 $\bigcirc \exists y \forall x (Rxy\&Fy)$ 

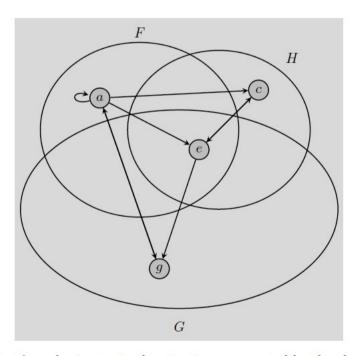
O∃y∀x(Rxy&Gy)

 $\bigcirc \exists y \forall x (Rxy \lor (\sim Rxy \& Gy))$ 

ONone of the above

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Refer to the following:



Which one of the following formulas is true in the situation represented by the above diagram?

 $\bigcirc \exists x \forall y (Rxy\&Ryx)$ 

 $\bigcirc \forall x \exists y (Hx \supset (Gy \& Rxy))$ 

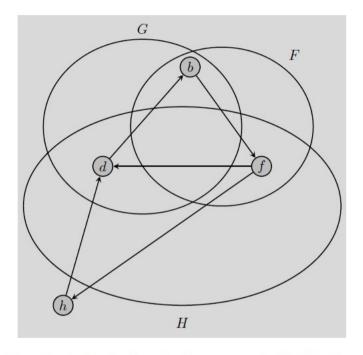
**○∃**x**∀**y(Rxy&Gx)

 $\bigcirc \forall y \exists x (Rxy\&Gy)$ 

ONone of the above

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Refer to the following:



Which one of the following formulas is true in the situation represented by the above diagram?

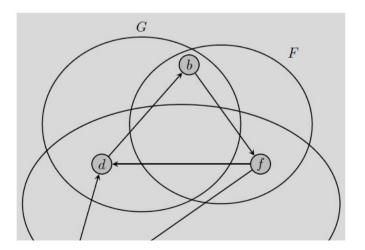
 $\bigcirc \exists x \forall y (Rxy\&Hx)$ 

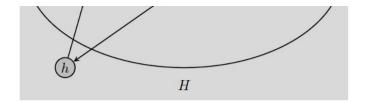
 $\bigcirc \exists x \forall y (\sim Gx \& Rxy)$ 

○∀y∃x(Rxy&Gy) ○∼∀y∃x(Fy&Rxy)

ONone of the above

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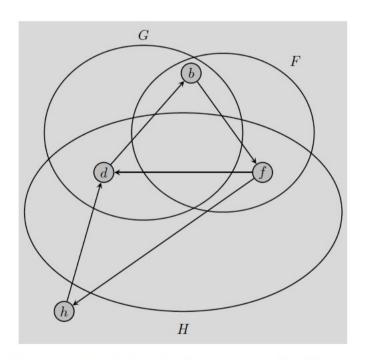


Which one of the following formulas is true in the situation represented by the above diagram?

- $\bigcirc \exists x \forall y (Hx\&Rxy)$  $\bigcirc \sim \exists x \forall y (Rxy\&Gx)$
- O~(∀y∃xRxy&~∃x∀yRxy)
- O∀y∃x(Rxy&Gx)
- ONone of the above

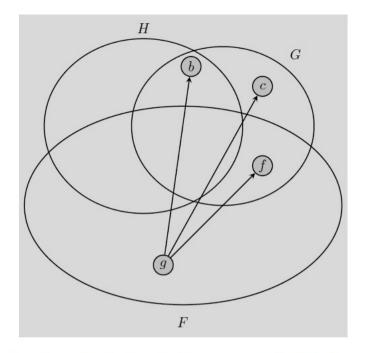
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Refer to the following:



Which one of the following formulas is true in the situation represented by the above diagram?

 $\bigcirc \sim (\forall x \exists y Rxy \& \sim \exists y \forall x Rxy)$ **49∃xf∀6**(Hx&Rxy) O~∀x∀y(Rxy⊃Fy)
Refertto the following: ONone of the above



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Refer to the following:

Which one of the following formulas is true in the situation represented by the above diagram?

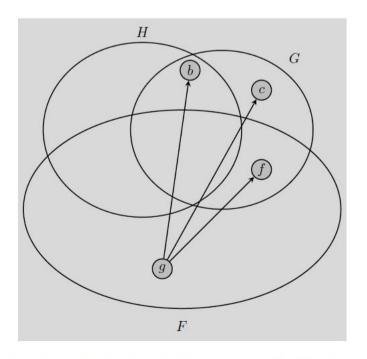
 $\bigcirc \exists x \exists y (Rxy \& (Hx \& \neg Gx))$ 

 $\bigcirc \exists x \forall y (Rxy \& (Hx \& \sim Gx))$ 

 $\bigcirc \forall y \exists x (Rxy)$ 

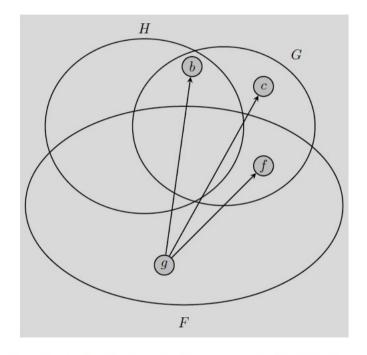
 $\bigcirc \forall x \forall y (Rxy \supset (Fx\&\sim Hx))$ 

None of the above



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Referred to the following formulas is true in the situation represented by the above diagram?



Which one of the following formulas is true in the situation represented by the above diagram?

- ○∃x∀y(Rxy&Gx) ○∃x∀y(Rxy&Fx)
- ○∃x∃y(Rxy&Ryx)
- $\bigcirc \exists x \exists x (Gx \& Rxy)$
- ONone of the above

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