

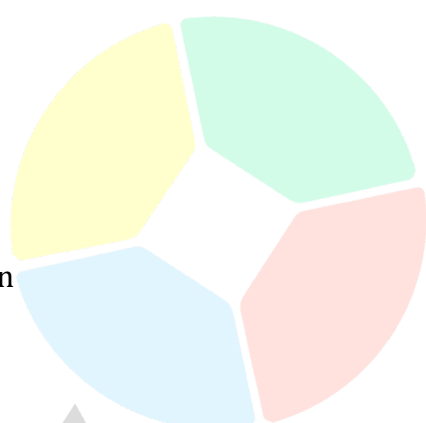
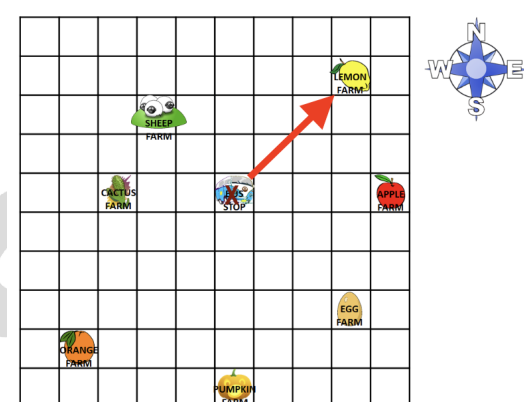


ANSWER KEY

QUESTION	CORRECT ANSWER
1	<p>C</p> <p>Given: 3:15 PM 40kmph 60km</p> <p>Solution: $60/40 = 1.5$ hours $3:15 + 1\text{hour } 30\text{ mins} = \mathbf{4:45 PM}$</p>
2	<p>E</p> <p>Given: 18 presents 3 present per hour Start = 7:00 AM</p> <p>Solution: $18/3 = 6$ hours $7:00 + 6\text{ hours} = \mathbf{1:00 PM}$</p>
3	<p>A</p> <p>Given: doubles every year 2020 = 20,000</p> <p>Solution: $2(X) = 2000 \leftarrow 2019, 1\text{ year backwards}$ $X = 10\,000$ Therefore the answer is year 2019</p>
4	<p>C</p> <p>Given: Fills = 30L per hour Total = 240 L Start = 10:00 AM</p> <p>Solution: $240/30 = 8$ hours $10:00 + 8 = \mathbf{6:00 PM}$</p>

5	<p>B Given: Clock reads = 11:20 1 ½ hours = Laundry</p> <p>Solution: 11:20 + 1 ½ hours = 12:50 Long hand = 10 Shorthand Almost at 1</p>   <p>Therefore the answer is choice B</p>
6	<p>A Given: 80 kmph Distance = 240 km Arrival = 4:15 Pm</p> <p>Solution: 240/80 = 3 hours 4:15 - 3 hours = 1:15 PM</p>
7	<p>C Given: 125 crayons per hour 800 crayons Finished = 5:15 Pm</p> <p>Solution: 800/125 = 6.4 hours or 6 hours 24 mins 5:15 - 6 hours 24 mins = 10:51 AM</p>
8	<p>E Given: triples every 5 mins 8:30 AM = 10 bacteria</p> <p>Solution: 10 x 3 = 30 bacteria ← 5 mins 30 x 3 = 90 bacteria ← 10 mins 8:30 + 10 mins = 8:40 AM</p>

9	<p>B</p> <p>Given: Outlet = 40 L per hour Finished = 8:45 PM Capacity = 290 L</p> <p>Solution: Total capacity / 40 L per hour = time $290/40 = 7.25$ hours or 7 hour and 15 mins Time = 7 hours and 15 mins ← Time to drain</p> <p>Time finished - Time to drain = Time Start $8:45 - 7 \text{ hours and } 15 \text{ mins} = \mathbf{1:30 \text{ PM}}$</p> 
10	<p>A</p> <p>Given: Start = 9:20 End = 10:45</p> <p>Solution: $10:45 - 9:20 = \mathbf{1 \text{ hour and } 25 \text{ mins}}$</p>
11	<p>E</p> <p>Given: Northeast = 45 degree</p> <p>Solution: $45 - (7/4)(360) = -585 \text{ degrees}$ ← - = anticlockwise turn $-585 \text{ degrees} = \mathbf{\text{Southeast}}$</p>
12	<p>A</p> <p>Given:</p>  <p>Solution:</p>

Mark should go to **North-East** direction

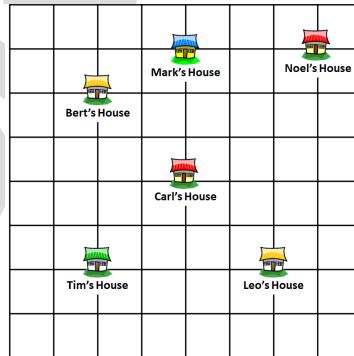
C
Given:



13

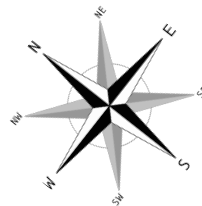
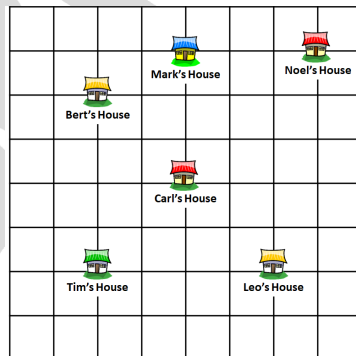
Solution:
 Museum = 90 degrees
 $90 - X = -180$ degrees
 $X = 270$ degrees anti clockwise
 $270 / \frac{1}{4} (360) = \mathbf{3 \text{ quarter turns}}$

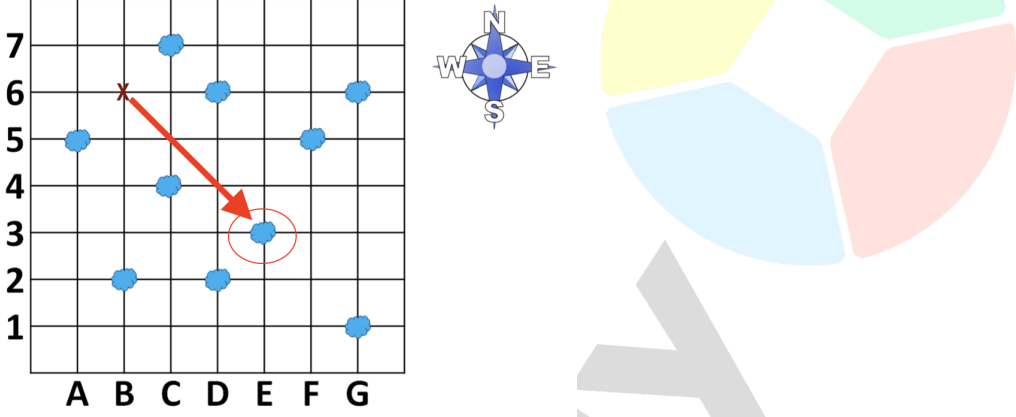
B
Given:



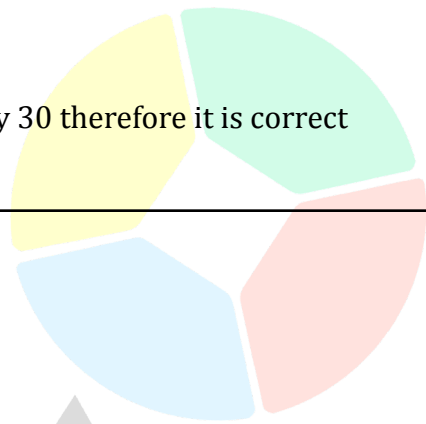
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Solution:



	Following the compass above, Noel's house will be located at East of Carl's house
15	<p>D Given:</p>  <p>Solution: following the Picture above E3 will be the location of the penguins</p>
16	<p>D Given: Left = 1:20 PM ; 12 km per hour 4km</p> <p>Solution: $4/12 = \frac{1}{3}$ hour = 20 mins 1:20 + 20 mins = 1:40 PM</p>
17	<p>C Given: Frank = 30 mins = 200 paper aeroplanes Jake = $\frac{1}{3}$ F Frank started = 9:00 AM</p> <p>Solution: 30 mins ← Frank $\frac{1}{3}$ (30) = 10 mins ← Jake 30 - 10 = 20 mins 9:00 + 20 mins = 9:20 AM</p>
18	<p>B Given: 1 week 3 days</p>

	<p>Start = Wed, Sept 24</p> <p>Solution: 1 week = 7 days 7 + 3 = 10 days Wednesday + 9 days = Friday ← Wednesday is counted as 1 Sept 24 + 9 days = October 3, Friday</p>
19	<p>A</p> <p>Given: 10:00 = 4 copies 1 copy = 80 pages 120 pages per hour</p> <p>Solution: 4(80) = 320 pages in total 320/120 = 8/3 hours or 2 hours and 40 mins 10:00 - 2 hours and 40 mins = 7:20 AM</p>
20	<p>D</p> <p>Given: Start = 3:25 225 mins</p> <p>Solution: 225/60 = 3.75 hours or 3 hours and 45 mins 3:25 - 3 hours and 45 mins = 11:40 AM</p>
21	<p>C</p> <p>Given: 3 000 kg July 14 300 kg per day ← first 2 days</p> <p>Solution: 300 + 300 = 600 kg ← 2 days 3000 - 600 = 2400 kg more 2400/600 = 4 days</p> <p>4 + 2 = 6 days to harvest July 14 - 6 days = July 8th</p>
22	<p>E</p> <p>Given: Every 30 mins</p>

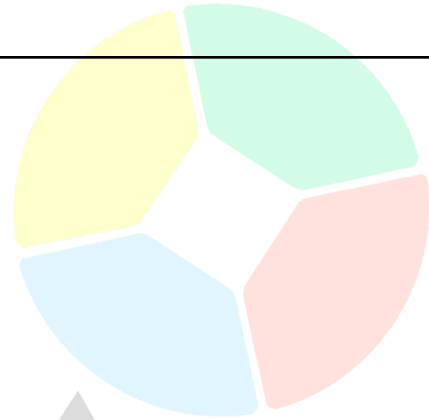


10:15 + 1 hour and 45 mins = **12:00 PM**

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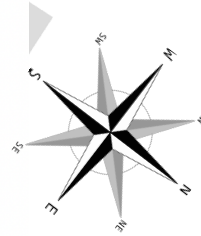
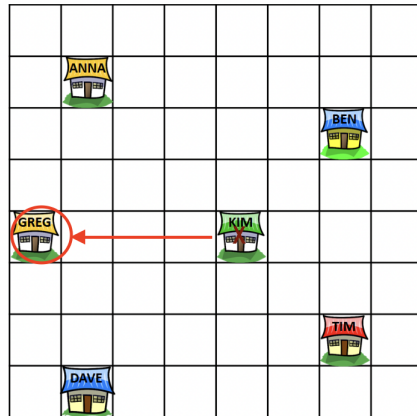
D
 Given:
 North = 0 degrees
 $X + \frac{3}{4} \text{ Turns} - \frac{1}{2} \text{ Turns} - \frac{1}{2} \text{ turns} = N$

Solution:
 $N = 0 \text{ degrees}$
 $X + \frac{3}{4} \text{ Turns} - \frac{1}{2} \text{ Turns} - \frac{1}{2} \text{ Turns} = N$
 $X + \frac{3}{4} (360) - \frac{1}{2} (360) - \frac{1}{2} (360) = 0$
 $X = 90 \text{ degrees}$
East = 90 degrees
 Therefore the answer is **East**



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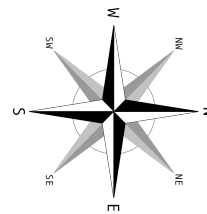
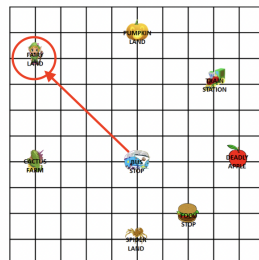
C
 Given:



Solution:
 Following the compass above, Greg's house will be located at **South-East** of Kim's house

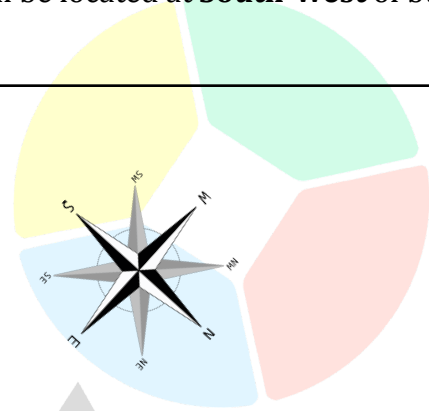
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B
 Given:



Following the compass above, **Fairy Land** will be located at **South-West** of bus stop

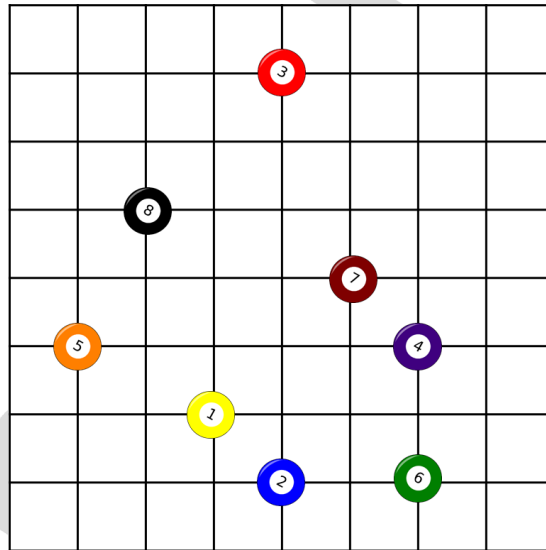
A
Given:



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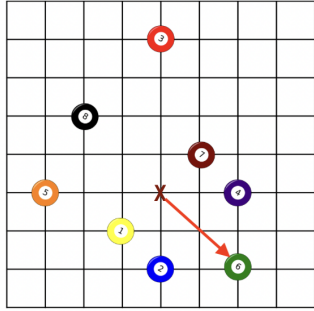
Solution:
Following the compass above, if bookstore = North
Museum will be at **North-West**

C
Given:



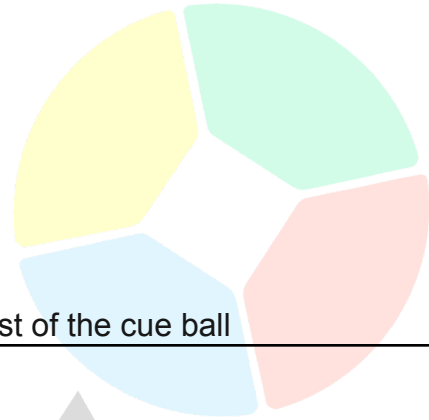
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Solution:



X = location of the cue ball

Therefore **number 6 ball** will be at southeast of the cue ball



Scholarly