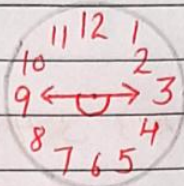


Ex-5.2

1. What fraction of a clockwise revolution does the hour hand of a clock turn through when it goes from

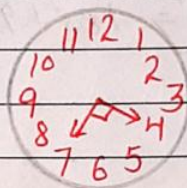
(a) 3 to 9

$$= \frac{180^\circ}{360^\circ} = \frac{1}{2}$$



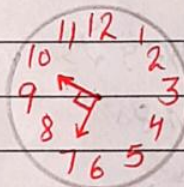
(b) 4 to 7

$$= \frac{90^\circ}{360^\circ} = \frac{1}{4}$$



(c) 7 to 10

$$= \frac{90^\circ}{360^\circ} = \frac{1}{4}$$



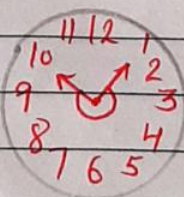
(d) 12 to 9

$$= \frac{270^\circ}{360^\circ} = \frac{3}{4}$$



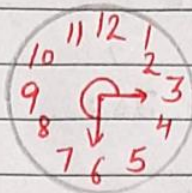
(e) 1 to 10

$$= \frac{270^\circ}{360^\circ} = \frac{3}{4}$$



(f) 6 to 3

$$= \frac{270^\circ}{4} - \frac{3}{4}$$



2. Where will the hand of a clock stop if it

(a) Starts at 12 and makes $\frac{1}{2}$ of a revolution, clockwise?

$$= \frac{1}{2} \times 360^\circ = 180^\circ$$

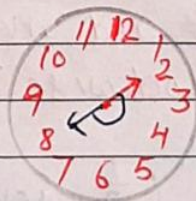
= At 6



(b) Starts at 2 and makes $\frac{1}{2}$ of a revolution, clockwise?

$$= \frac{1}{2} \times 360^\circ = 180^\circ$$

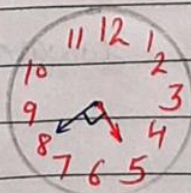
= At 8



(c) Starts at 5 and makes $\frac{1}{4}$ of a revolution, clockwise?

$$= \frac{1}{4} \times 360^\circ = 90^\circ$$

= At 8



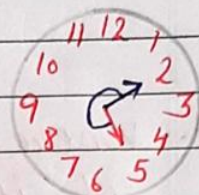
(d) Starts at 5 and makes $\frac{3}{4}$ of revolution, clockwise?

$$= \frac{3}{4} \times 360^\circ$$

$$= 270^\circ$$

$$= 180^\circ + 90^\circ$$

$$= \text{At } 2$$

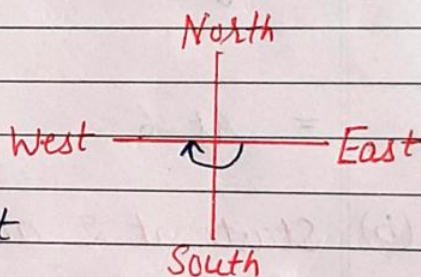


3. Which direction will you face if you start facing

(a) east and make $\frac{1}{2}$ of a revolution clockwise?

$$= \frac{1}{2} \times 360^\circ = 180^\circ$$

= towards West



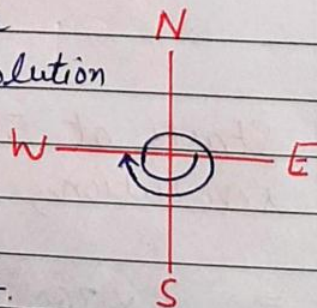
(b) east and make $1\frac{1}{2}$ of a revolution, clockwise?

$$= 1\frac{1}{2} \text{ revolution}$$

$$= 1 \text{ revolution} + \frac{1}{2} \text{ revolution}$$

$$= 360^\circ + 180^\circ$$

= towards west.



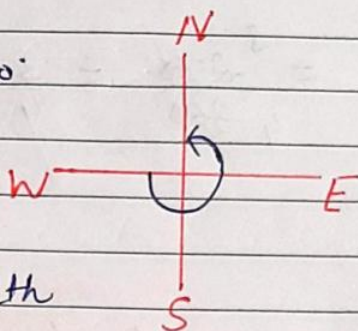
(4)

(c) West and make $\frac{3}{4}$ of a revolution, anti-clockwise?

$$= \frac{3}{4} \times 360^\circ = 270^\circ$$

$$= 180^\circ + 90^\circ$$

= towards North

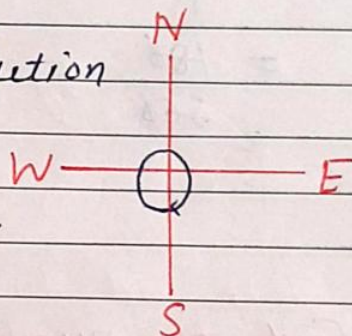


(d) South and make one full revolution?

= One full revolution

$$= 360^\circ$$

= towards South

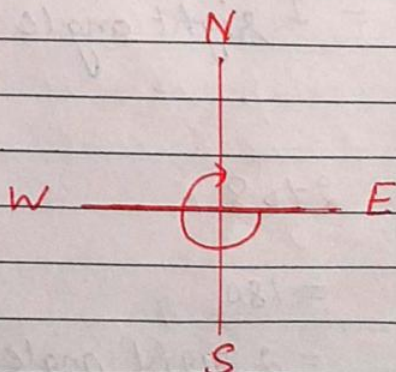


4. What part of a revolution have you turned through if you stand facing East and turn clockwise to face North?

$$= \frac{3}{4} \times 360^\circ$$

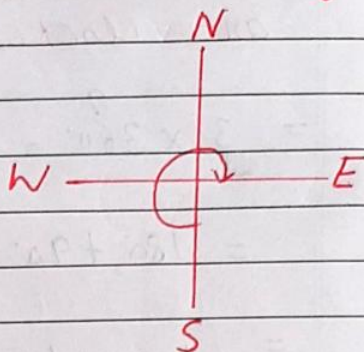
4

$$= \frac{3}{4}$$



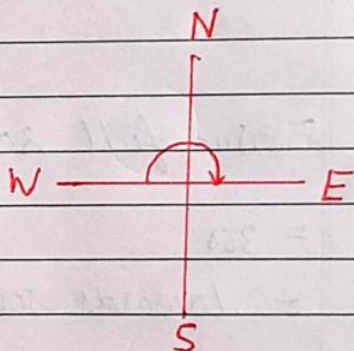
(b) South and turn clockwise to face east ?

$$= \frac{3}{4} \frac{270^\circ}{360^\circ} = \frac{3}{4}$$



(c) West and turn clockwise to face east ?

$$= \frac{1}{2} \frac{180^\circ}{360^\circ} = \frac{1}{2}$$

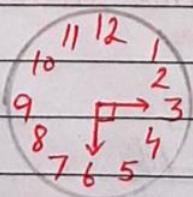


5. Find the number of right angles turned through by the hour hand of a clock when it goes from

(a) 3 to 6

$$= 90^\circ$$

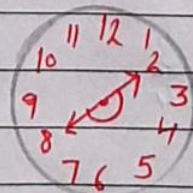
= 1 right angle



(b) 2 to 8

$$= 180^\circ$$

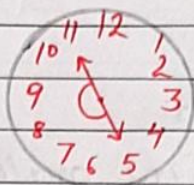
= 2 right angle



(c) 5 to 11

$$= 180^\circ$$

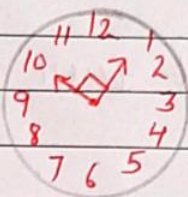
= 2 right angle



(d) 10 to 1

$$= 90^\circ$$

= 1 right angle



(e) 12 to 9

$$= 270^\circ$$

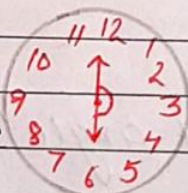
= 3 right angle



(f) 12 to 6

$$= 180^\circ$$

= 2 right angle

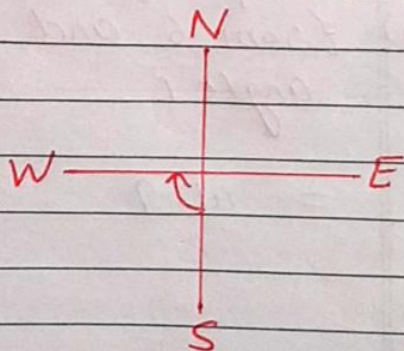


6. How many right angles do you make if you start facing

(a) South and turn clockwise to west?

$$= 90^\circ$$

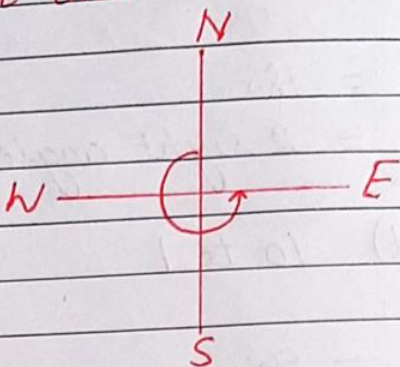
= 1 right angle



(b) North and turn anti-clockwise to east?

$$= 270^\circ$$

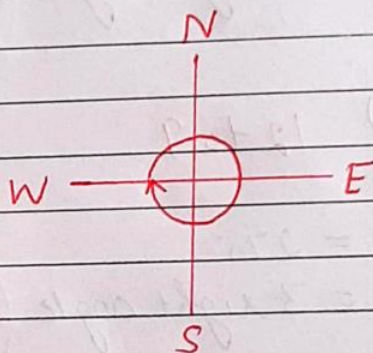
$$= 3 \text{ right angle}$$



(c) West and turn to west?

$$= 360^\circ$$

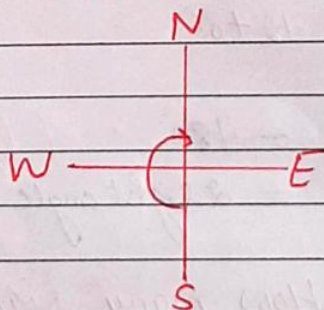
$$= 4 \text{ right angle}$$



(d) South and turn to north?

$$= 180^\circ$$

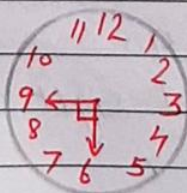
$$= 2 \text{ right angle}$$



7. Where will the hour hand of a clock stop if it starts

(a) From 6 and turns through 1 right angle?

$$= \text{at } 9$$



(8)

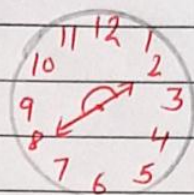
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(b) From 8 and turns through 2 right angles?

= 2 right angle (180°)

= at 2

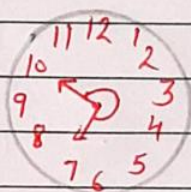


(c) From 10 and turns through 3 right angles?

= 3 right angle

$$270^\circ = 180^\circ + 90^\circ$$

= at 7



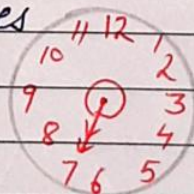
(d) From 7 and turns through 2 straight angles?

= 2 straight angles

$$= 2 \times 180^\circ$$

$$= 360^\circ$$

= at 7



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