Practice Questions for Clocks

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| Question | **the angle between the minute hand and the hour hand of a clock when the time is 8.30, is** |
| Option A | 80 |
| Option B | 60⁰ |
| Option C | 75 |
| Option D | 105 |
| Answer | Option C |
| Explanation | Angle traced by hour hand in 17/2 hrs = (260/12) \* (17/2) = 255°.  Angle traced by mm. hand in 30 mm. = (360/60) \* 30 = 180°.  Required angle = (255 — 180)° = 75°. |

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| Question | **How many times do the hands of a clock coincide in a day ?** |
| Option A | 20 |
| Option B | 22 |
| Option C | 23 |
| Option D | 24 |
| Answer | Option B |
| Explanation | The hands of a clock coincide 1 1 times in every 12 hours (Since between  11 and 1, they coincide only once, i.e. at 12 o’clock.  The hands coincide 22 times in a day. |

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| Question | **At 3.40, the hour hand and the minute hand of a clock form an angle of: -** |
| Option A | 120 |
| Option B | 130 |
| Option C | 125 |
| Option D | 135 |
| Answer | Option B |
| Explanation | Angle traced by hour hand in 12 hrs = 360°  Angle traced by it in 11/3 hrs =(360/12) \* (11/3) = 100°.  Angle traced by minute hand in 60 mm. = 360°.  Angle traced by it in 40 mm = (360/60) \* 40 = 240°.  Required angle = (240 - 110)° = 130°. |

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| Question | **The angle between the minut hand and the hour hand of a clock when the time is 4.20 is** |
| Option A | 10 |
| Option B | 5 |
| Option C | 15 |
| Option D | 20 |
| Answer | Option A |
| Explanation | Angle traced by hour hand in 13/3 hrs = (360/12) \* (13/3) = 130°.  Angle traced by min. hand in 20 min. = (360/60) \* 20 = 120°.  Required angle = (130 - 120)° = 10°. |

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| Question | **A watch which gains uniformly is 2 minute slow at noon on Monday and is 4 mm. 48 sec fast at2 p.m. on the following Monday. When was it correct ?** |
| Option A | 2 p.m. on Tuesday |
| Option B | 3 p.m. on Thursday |
| Option C | 2 p.m. on Wednesday |
| Option D | 1 p.m. on Friday |
| Answer | Option C |
| Explanation | Time interval from Monday Noon to following Monday at 2 p.m =7 days 2 hours=170 hours Total time gained in this interval =2 min + 4 min 48 sec= 6 min 48 sec= 34/5 min Now if clock gain's 34/5 min in 170 hours then it will gain 2 min in 170\*2\*5/34 hours = 50 hours Clock will show correct time 50 hours after Monday noon i.e 2 p.m on Wednesday. |

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| Question | An accurate clock shows 8 o'clock in the morning. Through how many degrees will the hour hand rotate when the clock shows 2 o'clock in the afternoon? |
| Option A | **144** |
| Option B | 150 |
| Option C | 168 |
| Option D | 180 |
| Answer | Option D |
| Explanation | |  |  | | --- | --- | | **Angle traced by hour hand in  5 hrs 10 min.** | = (360/12 x 6)° | | = 180°. | |

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| Question | A clock is started at noon. By 10 minutes past 5, the hour hand has turned through |
| Option A | 155 |
| Option B | 160 |
| Option C | 165 |
| Option D | 150 |
| Answer | Option A |
| Explanation | |  |  | | --- | --- | | **Angle traced by hour hand in  12 hrs** | =360° | | **Angle traced by hour hand in  5 hrs 10 min** | = 31 / 6 hrs | | =[360 / 12 x 31 / 6] | | = 155°. | |

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| Question | Find at what time between 8 and 9 o'clock will the hands of a clock be in the same straight line but not together. |
| Option A | [**10x11/10**](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_3.php#t1) |
| Option B | [**10x10/11**](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_3.php#t1) |
| Option C | [**11x10/11**](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_3.php#t1) |
| Option D | [**12x10/11**](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_3.php#t1) |
| Answer | Option B |
| Explanation | |  |  | | --- | --- | | At 8 o'clock, the hour is at 8 and the minute hand is at 12,i.e. the two hands are 20 min. Spaces apart. | | | **So, the minute hand gain** | = (30 - 20)minute | | **55 minutes will be gained in 60 min.** |  | | 10 minutes spaces will be gained in (60/55 x10) min. | = 10x10/11 min. | | The hands will be in the same straight line but not together at 10x10/11 min.past 8. | | |

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| Question | The angle between the minute hand and the hour hand of a clock when the time is 8.30, is |
| Option A | 80 |
| Option B | 75 |
| Option C | 60 |
| Option D | 105 |
| Answer | Option B |
| Explanation | |  |  | | --- | --- | | **Angle traced by hour hand in 17/2 hrs** | = (360/12x17/2 )° | | = 255. | | **Angle traced by min hand in 30 min** | = (360/60x30)° | | = 180. | | **Required angle** | = (255 - 180)° | | =75°. | |

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| Question | At what angle the hands of a clock are inclined at 15 minutes past 5? |
| Option A | 58 ½ |
| Option B | 64 |
| Option C | 67 ½ |
| Option D | 72 |
| Answer | Option C |
| Explanation | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | |  |  | | --- | --- | | **Angle traced by hour hand in 21/4 hrs.** | = (360/12x21/4)° | | = 157½° | | **Angle traced by min.hand in 15 min** | = (360/60x15)° | | = 90° | | **Therefore, the Required angle** | = [(157½°)-90°] | | = 67½° | |   Page 3 of 4[1](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_1.php)[2](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_2.php) 3[4](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_4.php) |

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| Question | How much does a watch lose per day, if its hands coincide ever 64 minutes? |
| Option A | [**32x8/11 min**](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_4.php#t1) |
| Option B | [**36x8/11 min**](http://www.a2zinterviews.com/Aptitude/clocks/problems-on-clocks_4.php#t1) |
| Option C | 90 min |
| Option D | 60 min |
| Answer | Option A |
| Explanation | |  |  | | --- | --- | | **55 min. spaces are covered in 60 min.** | | | 60 min. spaces are covered  in (60/55 x 60) min | = 65x5/11 min. | | **Loss in 64 min.(65x5/11 - 64).** | = 16/11 | | Loss in 24 hrs(16/11x1/64x24x60)min | = 32x8/11. | |

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| Question | The reflex angle between the hands of a clock at 10.25 is: |
| Option A | 180 |
| Option B | 192 ½ |
| Option C | 195 |
| Option D | 197 ½ |
| Answer | Option D |
| Explanation | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Angle traced by hour hand in | 125 | hrs = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 360 | x | 125 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | º | = 312 | 1 | º | . | | 12 | 12 | 12 | 2 |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Angle traced by minute hand in 25 min = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 360 | x 25 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | º | = 150º. | | 60 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Reflex angle = 360º - | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 312 | 1 | - 150 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | º | = 360º - 162 | 1 | º | = 197 | 1 | . | | 2 | 2 | 2 | |

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| Question | A clock is started at noon. By 10 minutes past 5, the hour hand has turned through: |
| Option A | 145 |
| Option B | 150 |
| Option C | 155 |
| Option D | 160 |
| Answer | Option C |
| Explanation | Angle traced by hour hand in 12 hrs = 360º.   |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Angle traced by hour hand in 5 hrs 10 min. *i.e.,* | 31 | hrs = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 360 | x | 31 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | º | = 155º. | | 6 | 12 | 6 | |

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| Question | A watch which gains 5 seconds in 3 minutes was set right at 7 a.m. In the afternoon of the same day, when the watch indicated quarter past 4 o'clock, the true time is: |
| Option A | 59 min, past 3 |
| Option B | 4 p.m. |
| Option C | 58 min, past 3 |
| Option D | 2 min, past 4 |
| Answer | Option B |
| Explanation | |  |  |  | | --- | --- | --- | | Time from 7 a.m. to 4.15 p.m. = 9 hrs 15 min. = | 37 | hrs. | | 4 |   3 min. 5 sec. of this clock = 3 min. of the correct clock.   |  |  |  |  |  | | --- | --- | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif | 37 | hrs of this clock = | 1 | hrs of the correct clock. | | 720 | 20 |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | http://www.indiabix.com/_files/images/aptitude/1-sym-imp.gif | 37 | hrs of this clock = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 1 | x | 720 | x | 37 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | hrs of the correct clock. | | 4 | 20 | 37 | 4 |         = 9 hrs of the correct clock.  http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif The correct time is 9 hrs after 7 a.m. *i.e.,* 4 p.m. |

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| Question | The angle between the minute hand and the hour hand of a clock when the time is 4.20, is: |
| Option A | 0 |
| Option B | 10 |
| Option C | 5 |
| Option D | 20 |
| Answer | Option B |
| Explanation | |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Angle traced by hour hand in | 13 | hrs = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 360 | x | 13 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | º | = 130º. | | 3 | 12 | 3 |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | | Angle traced by min. hand in 20 min. = | http://www.indiabix.com/_files/images/aptitude/1-sym-oparen-h1.gif | 360 | x 20 | http://www.indiabix.com/_files/images/aptitude/1-sym-cparen-h1.gif | º | = 120º. | | 60 |   http://www.indiabix.com/_files/images/aptitude/1-sym-tfr.gif Required angle = (130 - 120)º = 10º. |