RACES & GAMES OF SKILL - SOLVED EXAMPLES

Q 1 - In a Km. race, A beats B by 40m or 8 seconds. Find A's time over the course.

A - 1 min. 12 sec.

B - 2 min. 12 sec.

C - 3 min. 12 sec.

D - 4 min. 12 sec.

Answer - C

Explanation

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Clearly, B covers 40 m in seconds.
∴ B's time over the course = (8/40*1000) sec. = 200sec.
A's time over the course = (200-8) sec. =192 sec. = 3 min. 12 sec.
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Q 2 - A can run 1 km in 3 min.10sec. And B can cover the same distance in 3 min. 20 sec. By what distance can A beat B?

A - 80 m

B - 70 m

C - 60 m

D - 50 m

Answer - D

Explanation

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Clearly, A beats B by 10 sec.
Distance covered by B in 10 sec. = (1000/200*10)m = 50m
∴A beat B by 50 m.
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Q 3 - In 100m race, A runs at 6 kmph. If A gives B a start of 4m and still beats him by 12 seconds, what is the speed of B?

A - 1.8 km/hr

B - 2.8 km/hr

C - 3.8 km/hr

D - 4.8 km/hr

Answer - D

Explanation

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Time taken by A to run 100m = (60*60/6000*100) sec. = 60 sec.
B covers (100-4) m in (60 +12) sec.
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∴ B's speed = 96/72m/sec. = (96/72*18/5) km/hr = 4.8 km/hr
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Q 4 - A, B, C are the three contestants in a km race. If A can give B a start of 40m and A can give C a start of 64m, how many meters start can B give C?

A - 25 m.

B - 20 m.

C - 35 m.

D - 45 m.

Answer - C

Explanation

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While A covers 1000m, B covers (1000-40)=960m and C covers (1000-64) =936m.
When B covers 960 m, C covers 936 m.
When B covers 1000m, C covers (936/960*1000)m =975m
∴ B gives C a start of (1000-975) m = 25 m.
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Q 5 - A can run 1 km in 4min. 50 sec. and B in 5 min. How many meters start A give B in a km race so that the race may end in a dead heat?

A - 500/3 m

B - 400/3 m

C - 100/3 m

D - 200/3 m

Answer - C

Explanation

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Time taken by A to run 1 km = 290 sec.
Time taken by B to run 1 km = 300 sec.
A can give B a start of (300-290) = 10sec.
In 300 sec, B runs (1000/300*10) m = 100/3 m
∴ A can give B start of 100/3 m.
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Q 6 - In a race of 600m, A can beat B by 60m and in a race of 500m, B can beat C by 50m. By how many meters will A beat C in a race of 400m?

A - 46 m.

B - 56 m.

C - 66 m.

D - 76 m.

Answer - D

Explanation

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If A runs 600m, B runs 540 m.
If A runs 400m, B runs (540/600*400) m = 360m
When B runs 500m, C runs 450m.
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When B runs 360 m, C runs (450/500*360) m = 324 m.
∴ A beats C by (400-324) m =76 m.