

Simple Interest

Unit: Comparing Quantities - Student Practice Worksheet

Overview: Zara put Rs. 5,000 in a savings account at 8% per year. After 3 years, Kabir guessed she'd earn Rs. 1,200 — 8% of 5,000, times 3. Zara worked it out formally and got the same number, but only because she used the right formula, not a guess. She then asked him what would happen if the rate were per MONTH instead of per year — and his answer for THAT changed completely.

Practice Questions (30 Total)

Section A - Easy

Q1. Teal principal 1000 with a 5% maroon strip for 1 year. Simple interest?



P 1000, 5% for 1 year

- ☐ A. Rs. 5
- ☐ B. Rs. 50
- ☐ C. Rs. 500
- ☐ D. Rs. 100

Q2. What is the formula for simple interest?

- ☐ A. $SI = (P \times R \times T)/100$
- ☐ B. $SI = P + R + T$
- ☐ C. $SI = P \times R \times T$
- ☐ D. $SI = P/(R \times T)$

Q3. Find the SI on Rs. 2,000 at 6% per year for 2 years.

- ☐ A. Rs. 120
- ☐ B. Rs. 200
- ☐ C. Rs. 240
- ☐ D. Rs. 12

Q4. Teal principal 1000 plus maroon interest 200. Total amount?

 P 1000 + SI 200

- ☐ A. Rs. 800
- ☐ B. Rs. 200
- ☐ C. Rs. 1,000
- ☐ D. Rs. 1,200

Q5. Under simple interest, does the yearly interest amount change from year to year?

- ☐ A. No, it stays the same every year
- ☐ B. Yes, it grows each year
- ☐ C. Yes, it shrinks each year
- ☐ D. It depends on the currency

Q6. 6 months equals how many years?

- ☐ A. 0.6 years
- ☐ B. 0.5 years
- ☐ C. 6 years
- ☐ D. 1.5 years

Q7. Three equal year-bars on 5000 at 8%. Total simple interest?

 5000 at 8% for 3 years

- ☐ A. Rs. 400
- ☐ B. Rs. 800
- ☐ C. Rs. 1,200
- ☐ D. Rs. 4,000

Q8. In the SI formula, what does R stand for?

- ☐ A. The number of repayments
- ☐ B. The remaining balance
- ☐ C. The rupee amount
- ☐ D. The annual rate of interest as a percent

Q9. Find the SI on Rs. 4,000 at 10% per year for 1 year.

- ☐ A. Rs. 40
- ☐ B. Rs. 400
- ☐ C. Rs. 4,000
- ☐ D. Rs. 100

Q10. Write Amount from P, R, T, and say why T must be in years.

- ☐ A. Amount = $P(1 + RT/100)$
- ☐ B. Amount = $P \times R \times T$
- ☐ C. Amount = $P - RT/100$
- ☐ D. Amount = $RT/100$

Section B - Medium

Q11. 10000 at 12% per year, but time is the 6-month half-bar. SI?

12 months $\rightarrow$ 6 months = 0.5 yr

- ☐ A. Rs. 600
- ☐ B. Rs. 1,200
- ☐ C. Rs. 7,200
- ☐ D. Rs. 120

Q12. A sum triples itself under simple interest in 20 years. What is the annual rate?

- ☐ A. 15%
- ☐ B. 10%
- ☐ C. 5%
- ☐ D. 20%

Q13. A loan of Rs. 8,000 accrues Rs. 960 interest over 2 years. Find the annual rate.

- ☐ A. 12%
- ☐ B. 6%
- ☐ C. 8%
- ☐ D. 4%

Q14. 15000 teal bar at 4.5% for 2 years. Simple interest?

15000

4.5% × 2 years

- ☐ A. Rs. 675
- ☐ B. Rs. 6,750
- ☐ C. Rs. 1,350
- ☐ D. Rs. 135

Q15. Two sums of Rs. 4,000 and Rs. 6,000 both earn interest at 8% per year for 2 years. What is the difference in their SI?

- ☐ A. Rs. 160
- ☐ B. Rs. 320
- ☐ C. Rs. 200
- ☐ D. Rs. 640

Q16. A sum earns Rs. 450 SI at 9% per year for 5 years. Find the principal.

- ☐ A. Rs. 500
- ☐ B. Rs. 5,000
- ☐ C. Rs. 1,000
- ☐ D. Rs. 4,500

Q17. 3600 grows to 4320 in 4 years under SI. Annual rate?

3600 → 4320 in 4 years

- ☐ A. 5%
- ☐ B. 4%
- ☐ C. 6%
- ☐ D. 8%

Q18. A sum of Rs. 2,500 earns Rs. 300 SI at 8% per year. Find the time period.

- ☐ A. 1 year
- ☐ B. 2 years

- ☐ C. 3 years
- ☐ D. 1.5 years

Q19. Rs. 6,000 is invested at 7% per year for 3 years. Find the total amount.

- ☐ A. Rs. 7,260
- ☐ B. Rs. 1,260
- ☐ C. Rs. 6,420
- ☐ D. Rs. 6,700

Q20. 90-day loan on 10000 at 12% using a 360-day year. Convert time, then SI.

- ☐ A. Rs. 1,200
- ☐ B. Rs. 3,000
- ☐ C. Rs. 900
- ☐ D. Rs. 300

Section C - Challenge

Q21. P doubles in 8 years under SI. Years until the amount is 4P?

P	$2P / 8y$	to 4P takes ?
---	-----------	---------------

- ☐ A. 24 years
- ☐ B. 16 years
- ☐ C. 32 years
- ☐ D. 20 years

Q22. A sum of money at simple interest amounts to Rs. 2,240 in 2 years and to Rs. 2,600 in 5 years. Find the rate of interest.

- ☐ A. 6% per year
- ☐ B. 8% per year
- ☐ C. 10% per year
- ☐ D. 5% per year

Q23. Rs. 5,000 is lent partly at 8% and partly at 10% per year. If the total interest after 1 year is Rs. 440, and the total sum lent is Rs. 5,000, how much was lent at 10%?

- ☐ A. Rs. 3,000

- ☐ B. Rs. 2,000
- ☐ C. Rs. 2,500
- ☐ D. Rs. 1,500

Q24. Amount 6000 after 2 years and 7500 after 5 years. Annual SI rate?

2y → 6000

5y → 7500

- ☐ A. 8% per year
- ☐ B. 12% per year
- ☐ C. 15% per year
- ☐ D. 10% per year

Q25. Zara's Rs. 5,000 deposit earns 8% simple interest per year. After how many years will her total interest exceed her original principal?

- ☐ A. After exactly 8 years
- ☐ B. After more than 12.5 years
- ☐ C. After exactly 10 years
- ☐ D. It can never exceed the principal

Q26. A sum was invested for 3 years at R% per year simple interest. Had it been invested at (R+2)% per year, it would have earned Rs. 300 more. Find the principal.

- ☐ A. Rs. 6,000
- ☐ B. Rs. 4,500
- ☐ C. Rs. 5,000
- ☐ D. Rs. 3,000

Q27. 8000 at 10% SI, withdrawn after 8 of 12 months. Interest accrued?



8 of 12 months

- ☐ A. Rs. 800
- ☐ B. Rs. 640
- ☐ C. Rs. 666.67

☐ **D.** Rs. 533.33

Q28. Rs. 12,000 is divided into two parts. One part is lent at 6% and the other at 9% per year, both for 2 years, yielding total interest of Rs. 1,680. Find the part lent at 9%.

☐ **A.** Rs. 8,000

☐ **B.** Rs. 6,000

☐ **C.** Rs. 4,000

☐ **D.** Rs. 10,000

Q29. If the simple interest on a sum for 2 years at 5% per year is Rs. 50 less than the simple interest on the same sum for 3 years at 4% per year, find the principal.

☐ **A.** Rs. 5,000

☐ **B.** Rs. 2,500

☐ **C.** Rs. 1,000

☐ **D.** Rs. 500

Q30. 1320 after 3 years and 1440 after 5 years. Find P from the two-year gap.

☐ **A.** Rs. 1,140

☐ **B.** Rs. 1,200

☐ **C.** Rs. 1,000

☐ **D.** Rs. 1,080

Answer Key

Q1: (B) (b) Rs. 50. $SI = (1000 \times 5 \times 1)/100 = 50$.

Q2: (A) (a) $SI = (P \times R \times T)/100$. Principal times rate times time, divided by 100.

Q3: (C) (c) Rs. 240. $SI = (2000 \times 6 \times 2)/100 = 240$.

Q4: (D) (d) Rs. 1,200. Amount = Principal + SI = $1000 + 200 = 1200$.

Q5: (A) (a) No, it stays the same every year. Simple interest is always calculated on the same original principal.

Q6: (B) (b) 0.5 years. 6 months is half of 12 months, so $6/12 = 0.5$ years.

Q7: (C) (c) Rs. 1,200. $SI = (5000 \times 8 \times 3)/100 = 1200$.

Q8: (D) (d) The annual rate of interest as a percent. R is the yearly percentage rate used in the formula.

Q9: (B) (b) Rs. 400. $SI = (4000 \times 10 \times 1)/100 = 400$.

Q10: (A) (a) Amount = $P(1 + RT/100)$. This combines the principal with the added simple interest fraction.

Q11: (A) (a) Rs. 600. Convert 6 months to 0.5 years: $SI = (10000 \times 12 \times 0.5)/100 = 600$.

Q12: (B) (b) 10%. Tripling means SI equals 2P (Amount=3P, so $SI=2P$). $R = (2P \times 100)/(P \times 20) = 200/20 = 10$.

Q13: (B) (b) 6%. $R = (960 \times 100)/(8000 \times 2) = 96000/16000 = 6$.

Q14: (C) (c) Rs. 1,350. $SI = (15000 \times 4.5 \times 2)/100 = 135000/100 = 1350$.

Q15: (B) (b) Rs. 320. SI on 4000 = 640, SI on 6000 = 960; difference = $960 - 640 = 320$, matching $(6000 - 4000) \times 8 \times 2/100$ directly too.

Q16: (C) (c) Rs. 1,000. $P = (450 \times 100)/(9 \times 5) = 45000/45 = 1000$.

Q17: (A) (a) 5%. $SI = 4320 - 3600 = 720$. $R = (720 \times 100)/(3600 \times 4) = 72000/14400 = 5$.

Q18: (D) (d) 1.5 years. $T = (300 \times 100)/(2500 \times 8) = 30000/20000 = 1.5$.

Q19: (A) (a) Rs. 7,260. $SI = (6000 \times 7 \times 3)/100 = 1260$, Amount = $6000 + 1260 = 7260$.

Q20: (D) (d) Rs. 300. Time = $90/360 = 0.25$ years. $SI = (10000 \times 12 \times 0.25)/100 = 300$.

Q21: (A) (a) 24 years. Doubling means $SI=P$ in 8 years, so the rate makes P grow by P every 8 years; becoming $4 \times P$ means gaining 3P total, which takes $3 \times 8 = 24$ years.

Q22: (A) (a) 6% per year. 3 years of interest = $2600 - 2240 = 360$, so yearly interest=120; principal= $2240 - 240 = 2000$; rate= $(120 \times 100)/2000 = 6\%$.

Q23: (B) (b) Rs. 2,000. Let x be lent at 10%: $0.08(5000 - x) + 0.10x = 440 \rightarrow 400 - 0.08x + 0.10x = 440 \rightarrow 0.02x = 40 \rightarrow x = 2000$.

Q24: (D) (d) 10% per year. 3 years of interest = $7500 - 6000 = 1500$, so yearly interest=500; principal= $6000 - 1000 = 5000$; rate= $(500 \times 100)/5000 = 10\%$.

Q25: (B) (b) After more than 12.5 years. $SI=P$ when $(5000 \times 8 \times T)/100 = 5000$, giving $T = 12.5$ years; interest exceeds principal only after that point.

Q26: (C) (c) Rs. 5,000. The extra 2% over 3 years gives an extra $(P \times 2 \times 3)/100 = 300$, so $6P/100 = 300$, giving $P = 5000$.

Q27: (D) (d) Rs. 533.33. Time = 8/12 years. $SI = (8000 \times 10 \times 8/12)/100 = 640000/1200 \approx 533.33$.

Q28: (C) (c) Rs. 4,000. Let x be lent at 9%: $0.06(12000 - x) \times 2 + 0.09x \times 2 = 1680 \rightarrow 1440 + 0.06x = 1680 \rightarrow x = 4000$.

Q29: (B) (b) Rs. 2,500. $SI_2 = (P \times 5 \times 2)/100 = 0.1P$, $SI_3 = (P \times 3 \times 4)/100 = 0.12P$; given $0.1P = 0.12P - 50$, so $0.02P = 50$, $P = 2500$.

Q30: (A) (a) Rs. 1,140. 2 years of interest = $1440 - 1320 = 120$, so yearly interest = 60; 3 years interest = 180; Principal = $1320 - 180 = 1140$.

You've got this! Keep learning and shining! - Ruchi Math Coaching