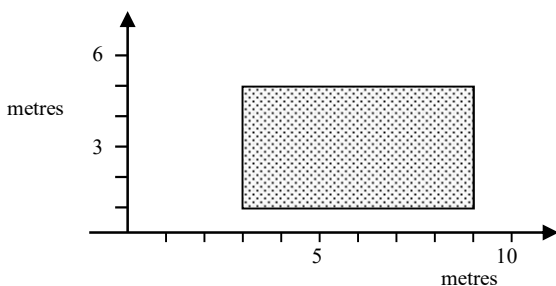| Topic Overview	Sample Questions	Answers
1. Arithmetic	$16\overline{)340} =$	21.25
2. Order of operations	$15 - 6 \times 2 + 5 =$	8
3. Signed number arithmetic	$-8 - (4 - 7) + 2 =$	-3
4. Common fractions	$6 \cdot \dfrac{4}{27} =$	$\dfrac{8}{9}$
	$4\dfrac{2}{3} - 3\dfrac{2}{9} =$	$\dfrac{13}{9}$
	$3\dfrac{3}{4} \div 1\dfrac{7}{8} =$	2
5. Decimal fractions	Convert to a decimal: $\dfrac{21}{16} =$	1.3125
6. Percentage fractions	3 is what percentage of 24?	12.5%
	Convert to a decimal: 7.5%	0.075
7. Basic algebra	If $x = 9$ and $y = -2$ determine the value of $4\sqrt{x} - y^3$.	20
	Solve for x: $3(5 - x) = 2x + 7$	$x = 1.6$
	Solve for x: $a(b - x) = cx + d$	$x = \dfrac{ab - d}{a + c}$
8. Basic applications	A jacket is reduced from \$125 to \$100. What percentage reduction is this?	20%
	A car rental company charges \$30 plus 5 cents per kilometre driven. Write an expression for the cost c (in dollars) for a car driven d kilometres.	$c = 30 + 0.05d$
	On a test 24 students passed and 8 failed. What percentage failed?	25%
	What is the area of the shaded rectangle?	24 m²
	What is the perimeter of the shaded rectangle?	20 m

Basic MPT Sample Questions

Choose the correct answer. Do not use a calculator.
Check your answers against the Answer Key provided on the MPT website.

1. $378.2 - 78.56 =$

(a) 299.64   (b) 300.64   (c) 299.36   (d) 300.36   (e) 298.34

2. $15.9 \times 7.02 =$

(a) 114.48   (b) 105.18   (c) 111.618   (d) 111.6   (e) 111618

3. $(-3)(2)(-7) =$

(a) 8   (b) -42   (c) -126   (d) 42   (e) 126

4. Round 612.3679 to the nearest tenth.

(a) 612.4   (b) 610   (c) 600   (d) 612.3   (e) 612

5. $\dfrac{7}{4} + \dfrac{3}{8} =$

(a) $\dfrac{6}{100}$ (b) $\dfrac{17}{8}$ (c) $\dfrac{60}{100}$ (d) $\dfrac{10}{12}$ (e) $\dfrac{5}{6}$

6. $7\dfrac{1}{4} - 5\dfrac{5}{12} =$

(a) $2\dfrac{5}{6}$ (b) $-\dfrac{11}{6}$ (c) $12\dfrac{2}{3}$ (d) $2\dfrac{1}{6}$ (e) $1\dfrac{5}{6}$

7. $\dfrac{3}{6} \times \dfrac{8}{9} =$

(a) $\dfrac{11}{36}$ (b) $\dfrac{27}{56}$ (c) $\dfrac{11}{15}$ (d) $\dfrac{4}{9}$ (e) $\dfrac{4}{3}$

8. $\dfrac{8}{5} \div 4 =$

(a) $\dfrac{2}{5}$ (b) $\dfrac{32}{5}$ (c) $\dfrac{32}{10}$ (d) $\dfrac{32}{20}$ (e) $\dfrac{8}{5}$

9. Convert $\dfrac{3}{5}$ to decimal notation.

(a) 60%   (b) $\dfrac{6}{100}$ (c) $\dfrac{6}{10}$ (d) 0.3   (e) 0.6

10. Convert 12.9% to decimal notation.

(a) 0.13   (b) 0.129   (c) 12.9   (d) 13%   (e) 0.12

11. Your boss raises your wages from $8 per hour to $10 per hour. What percentage increase is this?

(a) 20%   (b) 80%   (c) 2%   (d) 25%   (e) $\frac{1}{4}$%

12. If you score 27 out of 60 on a test, what is your test score as a percentage?

(a) $\frac{9}{20}$%   (b) 45%   (c) .45%   (d) $\frac{20}{9}$%   (e) 50%

13. You are in the corner store and see the following price signs for a chocolate bar. Which is obviously incorrect?

(a) $0.69   (b) 69¢   (c) .69¢   (d) none of these   (e) all of these

14. If x = 3 and y = -2, evaluate $2xy + y^2$

(a) -4   (b) 12   (c) –12   (d) 8   (e) -8

15. Solve the equation: 5x + 7 = 2x – 3

(a) $x = \frac{4}{7}$ (b) $x = \frac{10}{3}$ (c) $x = -\frac{10}{3}$ (d) $x = -\frac{5}{2}$ (e) $x = \frac{4}{3}$

16. Simplify: 2(3x – y) – x – 4(x – 2y)

(a) x + 6y   (b) x – 10y   (c) 9x + 6y   (d) 2x + 6y   (e) 5x – 3y

17. $\sqrt{9+16} =$

(a) 7   (b) 25   (c) 5   (d) 12   (e) undefined

18. Three more than six times a number is 10. Which equation can be used to solve this problem?

(a) 3x–6=10   (b) 6+3x=10   (c) 6x=13   (d) 6(x+3)=10   (e) 3+6x=10

19. Your average on three tests is 60%. If your grade on a fourth test is 70%, what is your new average?

(a) 68%   (b) 63%   (c) 65%   (d) 62.5%   (e) none of these

20. Tom, Dick and Harry are to share $100. Tom and Dick are given an equal amount of money and Harry is given $54. How much money is given to Tom?

(a) $54   (b) $23   (c) $46   (d) $27   (e) $154