

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	$6 \cdot \frac{4}{27} =$	$\frac{8}{9}$
	$4\frac{2}{3} - 3\frac{2}{9} =$	$\frac{13}{9}$
	$3\frac{3}{4} \div 1\frac{7}{8} =$	2
5. Decimal fractions	Convert to a decimal: $\frac{21}{16} =$	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 : $a(b - x) = cx + d$	$x = \frac{ab - d}{a + c}$
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?

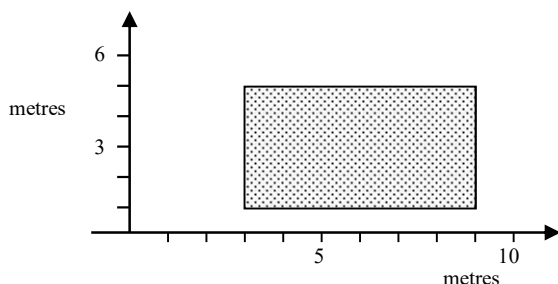
25%

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. $\frac{7}{4} + \frac{3}{8} =$

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

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

(a) $2\frac{5}{6}$

(b) $-\frac{11}{6}$

(c) $12\frac{2}{3}$

(d) $2\frac{1}{6}$

(e) $1\frac{5}{6}$

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

(a) $\frac{11}{36}$

(b) $\frac{27}{56}$

(c) $\frac{11}{15}$

(d) $\frac{4}{9}$

(e) $\frac{4}{3}$

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

(a) $\frac{2}{5}$

(b) $\frac{32}{5}$

(c) $\frac{32}{10}$

(d) $\frac{32}{20}$

(e) $\frac{8}{5}$

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

(a) 60%

(b) $\frac{6}{100}$

(c) $\frac{6}{10}$

(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) $5x - 3y$

