

MPM 1DI: *Integers & Rationals Review*

1. Evaluate:

a) $5 - (-13)$

b) $7 + (-16)$

c) $-27 + 34 - 6$

d) $-6(7)$

e) $-25(-2)(-1)$

f) $(-32) \div (-4)$

g) $(-3)^2 + (-1)^3$

h) -9^2

i) $3 + 5(7) - 2$

j) $(-6 - 4) \div 2(-4)$

k) $18 \div 3 \times 5 \div (-15) + 8$

l) $2^3(-5) - 25 \div 5$

m) $3^2 - (5 - 3^2)$

n) $22 \div 11 + (-36) \div 3 \times 4$

o) $22 \div 11 + (-36) \div (3 \times 4)$

p) $7^2 + (-3) \times 2 + (-9 + 4) \div 5$

q) $[7^2 + (-3)] \times [2 + (-9 + 4) \div 5]$

r) $99 \div (3 \times 11) - 2^2$

s) $2^3 + 5(-3)^2 - 20 \div 2^2$

t) $\frac{15 \div 5 - 16 \div (-4) + 1}{(-1)(-4) - 2}$

u) $\frac{-8 - 12 \div 4 - (-2)}{4 - 5(-2) - 11}$

2. Identify which number set(s) each of the following numbers belongs to:

a) $-\frac{2}{3}$

b) 50

c) $\sqrt{3}$

d) $-6.\overline{43}$

3. Convert each rational number to its *decimal* form:

a) $\frac{8}{7}$

b) $-3\frac{5}{8}$

c) $\frac{5}{33}$

d) $1\frac{1}{11}$

4. Convert each rational number to its *fractional* form:

a) 0.48

b) 1.19

c) 3.375

d) $0.\overline{036}$

e) $0.0\overline{36}$

f) $0.2\overline{57}$

g) $1.\overline{18}$

h) $-5.\overline{26}$

5. Evaluate:

a) $-1\frac{1}{5} - \left(-\frac{2}{15}\right)$

b) $\left(-\frac{7}{8}\right)\left(-3\frac{1}{5}\right)\left(-\frac{10}{3}\right)$

c) $\left(-2\frac{1}{7}\right) \div \left(\frac{10}{21}\right)$

d) $-\left(\frac{4}{5}\right)^2$

e) $\left(-\frac{1}{3}\right)^3$

f) $\frac{1}{8} + \left(-1\frac{2}{5}\right)\left(-3\frac{1}{2}\right)$

g) $\left(-\frac{5}{6}\right) - \left(-\frac{2}{3}\right) + \left(-\frac{5}{9}\right)$

h) $\left[1\frac{1}{3} \div (-2)\right] - \left[\left(-5\frac{1}{3}\right) \div \left(-\frac{8}{7}\right)\right]$

i) $\frac{\frac{1}{2} + \frac{2}{3}\left(-\frac{6}{11}\right)}{\left(2\frac{3}{5}\right) \div \left(-\frac{1}{10}\right)}$

j) $\left(-\frac{5}{2}\right)^2 - \left(\frac{1}{4}\right)^2$

k) $\left(-\frac{24}{45}\right)\left(-\frac{18}{39}\right)\left(\frac{5}{16}\right)$

l) $-2\frac{1}{4} - \left(-1\frac{3}{5}\right) \div \left(-2\frac{3}{4}\right)$

m) $\frac{\frac{1}{4} - \left(-\frac{2}{3}\right) + \frac{6}{5}}{\left(-\frac{1}{4}\right)\left(-\frac{2}{3}\right)\left(\frac{6}{5}\right)} - \frac{\left(-\frac{1}{6}\right) + \left(-\frac{3}{5}\right) - \frac{7}{10}}{\left(-\frac{1}{6}\right)\left(-\frac{3}{5}\right)\left(\frac{7}{10}\right)}$

ANSWERS

1. a) 18 b) -9 c) 1 d) -42
 e) -50 f) 8 g) 8 h) -81
 i) 36 j) 20 k) 6 l) -45
 m) 13 n) -46 o) -1 p) 42
 q) 46 r) -1 s) 48 t) 4
 u) -3
2. a) \mathbb{Q}, \mathbb{R} b) $\mathbb{N}, \mathbb{W}, \mathbb{Z}, \mathbb{Q}, \mathbb{R}$ c) $\overline{\mathbb{Q}}, \mathbb{R}$ d) \mathbb{Q}, \mathbb{R}
3. a) $1.\overline{142857}$ b) -3.625 c) $0.\overline{15}$ d) $1.\overline{09}$
4. a) $\frac{12}{25}$ b) $\frac{119}{100}$ c) $\frac{27}{8}$ d) $\frac{4}{111}$
 e) $\frac{2}{55}$ f) $\frac{17}{66}$ g) $\frac{107}{90}$ h) $-\frac{521}{99}$
5. a) $-\frac{16}{15}$ b) $-\frac{28}{3}$ c) $-\frac{9}{2}$ d) $-\frac{16}{25}$
 e) $-\frac{1}{27}$ f) $\frac{201}{40}$ g) $-\frac{13}{18}$ h) $-\frac{16}{3}$
 i) $-\frac{3}{572}$ j) $\frac{99}{16}$ k) $\frac{1}{13}$ l) $-\frac{623}{220}$
 m) $\frac{883}{28}$