

5 Year 8 Term 1 Week 5 Answers

5.1 Algebra

E 5.1.1 (1) $-5a(3a - 7b)$; (2) $2(u + v - 6)$; (3) $3(2x - 3y + 8z)$; (4) $6xy(3x - 4z)$;
 (5) $ab(a + b + 2)$; (6) $-3qp(4q + 3p)$; (7) $4x(3wy - 5x + 2y^2)$; (8) $5b(7ab - 8a^2b + 3)$

E 5.1.2 (1) $(a + 3)(b + c)$; (2) $(a + 1)(a + 4)$; (3) $(2x - 2)(y - 2)$; (4) $(2c - 1)(c + d)$;
 (5) $(1 - a)(a - 3)$; (6) $(u + 2v)(v + 12)$; (7) $(5m - 5n)(n - 5)$; (8) $(1 - n)(k + m)$

E 5.1.3 (1) $a^4(1 - a)$; (2) $b^3(b^3 + 2)$; (3) $4x^4(x^2 - 2)$; (4) $2m^3(4m - 7n)$; (5) $u^6(5u^2 + 3)$;
 (6) $2xy(x - 3y^3 + 4xy)$; (7) $4a^3b^2(3a^3b^2 + 2a - 4b^3)$; (8) $x^2y^3z^4(3 + xyz - 9x^4y^2)$;

E 5.1.4 (1) $\frac{t}{3}$; (2) $\frac{2m}{3}$; (3) $\frac{31w}{20}$ or $1\frac{11}{20}w$; (4) $\frac{3x}{5}$; (5) $\frac{y}{8}$;

E 5.1.5 (1) $\frac{3a+7}{4}$; (2) $\frac{7m-2}{12}$; (3) $\frac{12x+16}{35}$; (4) $\frac{-x+29}{10}$ or $\frac{29-x}{10}$; (5) $\frac{43y-26}{28}$; (6) $\frac{3n+4}{6}$;
 (7) $\frac{-5b+33}{24}$ or $\frac{33-5b}{24}$; (8) $\frac{11s}{3t}$;

E 5.1.6 (1) $\frac{a^2}{2}$; (2) $\frac{3xy}{2}$; (3) $\frac{3}{4d^2}$; (4) $\frac{28w^2}{15xy}$; (5) $\frac{ky}{24}$; (6) $\frac{c}{bd}$; (7) $\frac{5eg}{8fh}$; (8) $\frac{9a^2}{16cd}$;

E 5.1.7 (1) $\frac{mn}{24}$; (2) $\frac{3x}{2y}$; (3) $\frac{6e}{5f}$; (4) $\frac{9xz}{10y^2}$; (5) $5mn$; (6) $7\frac{1}{5}$; (7) $\frac{4w}{3u}$; (8) $\frac{1}{y^2}$;

5.2 Pythagoras' theorems

E 5.2.1 (1) Yes; (2) No; (3) No; (4) Yes;

E 5.2.2 (1) No; (2) No; (3) Yes; (4) Yes;

5.3 Data Representation

E 5.3.1 (1) C; (2) CQ; (3) CQ; (4) DQ; (5) CQ; (6) CQ;

E 5.4.1 (1) 13 cm; (2) 8.54 cm; (3) \$25767; (4) a. 400 m, b. 8 min;

E 5.4.2 (1) $\frac{5d}{12}$; (2) $\frac{m}{3x}$; (3) $\frac{12xa^2}{5y}$; (4) $4xy^2$;

E 5.4.3 (1) \$470.31; (2) \$795.14; (3) \$23449.18;

E 5.4.4 (1) CQ; (2) CQ; (3) CQ; (4) C; (5) C; (6) CQ; (7) CQ; (8) DQ;

E 5.4.5 (1) $6x^2 + x - 35$; (2) $4m^2 - 20m + 25$; (3) $180 - 80x^2$;

5.4 Topic Test (Percentage)

- (1) $\frac{43}{150}$;
- (2) 0.000125 ;
- (3) 1.25% ;
- (4) $0.018 \square 18\%$;
- (5) 90 or 90 out of 120 or $\frac{90}{120}$;
- (6) 1278 ;
- (7) 300% ;
- (8) 22.5% ;
- (9) 50% apples, 29.17% oranges, 16.67% pears and 4.17% mangoes ;
- (10) $75\% \times 120 + 85\% \times 80 = 158 \frac{158}{200} \times 100\% = 79\%$;
- (11) $75 \times 88\% = \$66$; (12) $\frac{180-45}{180} \times 100\% = 75\%$;
- (13) $14 \div 4 \times 100 = 350$;
- (14) $\$915.74 \div 1.055 = \868 ;
- (15) $(\$895 - \$250) \div 0.02 = \$32250$;
- (16) $\$1750 \div 1.4 = \1250 ;
- (17) $\frac{(\$5400 - \$4000)}{\$4000} \times \frac{100\%}{1} = 35\%$;
- (18) $\frac{(\$50.64 \times 4)}{3376} \times \frac{100\%}{1} = 6\%$;
- (19) $\$56786.40 \div 1.08 = \52580 ;
- (20) $100\% - (85\% \times 88\% \times 88\%) = 34.176\%$;