Intermediate Algebra Skill

Multiplying Rational Expressions

Multiply.

1) $\dfrac{7b^3 + 70b^2}{10b} \cdot \dfrac{1}{b + 10}$

2) $\dfrac{4n^2}{16n^3 + 72n^2} \cdot \dfrac{4n + 18}{2}$

3) $\dfrac{8n}{5n + 10} \cdot \dfrac{5n^2 - 25n - 70}{n + 3}$

4) $\dfrac{5v^2 - 42v + 16}{v + 9} \cdot \dfrac{1}{2 - 5v}$

5) $\dfrac{4m^2 - 36m}{m^2 + 3m - 70} \cdot \dfrac{m^2 + 11m + 10}{m^2 - 8m - 9}$

6) $\dfrac{b^2 - 2b - 3}{9 - b} \cdot \dfrac{b^2 - 6b - 27}{b^2 - 2b - 3}$

7) $\dfrac{3p^2 - 28p + 49}{12p^3 - 18p^2} \cdot \dfrac{14p^2 - 9p - 18}{21p^2 - 31p - 42}$

8) $\dfrac{2a^2 + 4a + 2}{6} \cdot \dfrac{6a - 48}{2a^2 + 8a + 6}$

9) $\dfrac{5r^2 + 20r - 25}{8r + 40} \cdot \dfrac{2r^2 + 30r + 100}{5r - 5}$

10) $\dfrac{14n^2 - 5n - 1}{2n^2 - 5n + 2} \cdot \dfrac{30n - 20}{21n^2 - 11n - 2}$

Answers to Multiplying Rational Expressions

1) $\dfrac{7b}{10}$

2) $\dfrac{1}{2}$

3) $\dfrac{8n(n-7)}{n+3}$

4) $-\dfrac{(v-8)}{v+9}$

5) $\dfrac{4m}{m-7}$

6) $-(b+3)$

7) $\dfrac{p-7}{6p^2}$

8) $\dfrac{(a+1)(a-8)}{a+3}$

9) $\dfrac{(r+5)(r+10)}{4}$

10) $\dfrac{10}{n-2}$